

A sepia-toned photograph of a desolate landscape. In the foreground, a large, light-colored log lies horizontally across the frame, partially buried in dark, dense vegetation. Behind it, a structure made of several thin, dark sticks or branches is erected, resembling a simple tripod or a rudimentary shelter. The background is a flat, open expanse of land under a pale, hazy sky. The overall mood is one of isolation and decay.

BLACK AND GREEN REVIEW

NO 5



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Art by Dylan Garrett Smith.
dylangarrettsmith.com

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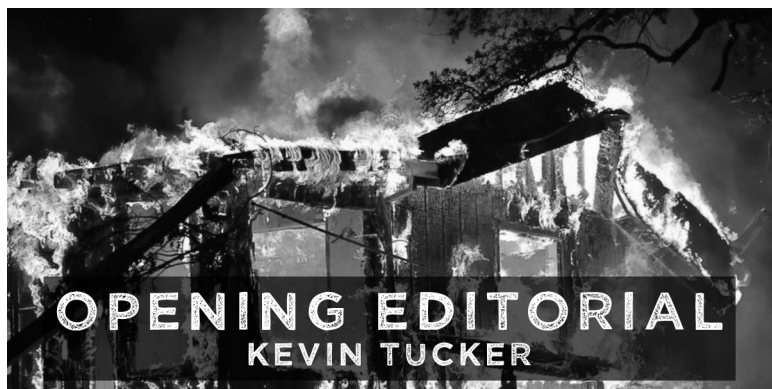
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The most crucial part of creating fire by friction is to get a hot coal.

A burning ember.

The contact of two sticks creates dust to collect into a divot in the fireboard while friction creates the heat. When the compacted dust and heat get oxygen, you have your starting point. More oxygen in the form of blowing, more fuel in the form of wood or grasses and there you have it: fire.

The first time you get that flame, you realize how much work it takes to create fire. It's as intense as the flame itself: dancing with energy, bounding on the edge of destruction as it consumes anything flammable laid before it. It's enough to evoke wonder and awe alongside the warmth it offers.

Matches. Lighters. Combustion engines. We have a lot of technology that allows us to completely take fire for granted. To remove ourselves from the effort and rob ourselves of the awe. It keeps us from appreciating how even the most simple of reactions—one that has been a part of our tool kit as a species well beyond the era of *Homo sapiens*—can really impact the world.

In the shadows cast by our indifference, our world increasingly moves from burning embers to one engulfed in flames. The friction begun by domestication spreads its scale as fields fell to cultivation and forests became fields. Mechanically amplified and chemically fed, the embers overcame the peasants, slaves, and workers. The forests went from ash to coal. The deserts dried and the grasslands became deserts.

At times there were flames, but civilization runs on coals.

There's a fine balance necessary to tend the social machinery of civilization and keep things moving. The friction is always there, at least enough to enforce the hierarchies, but ideally not enough to

cause uprisings. It becomes suppression on the ground, cosmological release into the sky.

Over time, the balance tipped beyond the point of no return. Climate instability tips the scales and it doesn't take much for the embers to catch. The world increasingly turns into premature fuel. All delusions of control go out of the window.

And then we have wildfires.

Decades of suppressing naturally occurring fires created more undergrowth to slow the movements of burns: feeding flames, increasing heat. Matches. Lit cigarettes. Engine fires. Industrialism. The stage is set for hotter, prolonged burning as the world becomes tinder. Any ember will do. When the embers cede to flames, they take on a life of their own.

Inevitably, it becomes uncontrollable.

Everywhere our world is either burning or on the edge of burning. Literally, figuratively: it gets increasingly meaningless to distinguish. When lost in awe of the flames of a burning coastline or the dumpster fire of a ludicrous socio-political reality, it's hard to do anything but just stare, observe: to become a spectator of.

I've written enough of these op-eds that it feels inevitable to say that each time things just get hotter and disconnect increases while the fragility of our reality increases. It can feel like trite nay saying, yet it's never untrue. The cracks in the veneer grow exponentially, both in politics and disrupted ecologies. Everyday feels like a new low. Each day feels like the bottom, but there's always tomorrow. The new blaze—bigger and brighter than yesterday's—grabs your attention.

The fires grow. The planet burns. Day in, day out.

The domesticators and programmers can deny and lie all they want. They can even believe their lies. As we know from the collapse of past civilizations, it doesn't matter. The fate of those wielding social and political power was set in the origins of domestication. Every growth in technology—and its ability to destroy the fragile ecological bounds upon which civilizations are maintained—increases the severity of the collapse.

This doesn't end peacefully. Those in power don't cop to their attempted omnicide. They don't own it. They don't step down. They don't cede ground.

They don't learn until it's far too late that the limitations of social, political, and religious power end with the civilizations that make them possible. All civilizations are dependent upon the ecology that

they parasitize upon. Those who tout any semblance of control must deny that reality. They destroy. They kill. They wreck a home they never acknowledged. They can pretend they are tending coals while they fan embers.

They can attempt to control wildfires, but outside the realms of politics and religion, they have absolutely no say. Though they might try to suppress them all, the fanned embers will catch. The fires will blaze and spread. The façade of control too will burn.

As the state of the world rapidly declines and the ability to have its downfall streamed before us increases, it gets harder to look up. It will continue to get harder to think ahead, to not be stunted by the new daily low, the new chaos of an unbridled might unraveling towards unilateral destruction. As the world burns, it can feel impossible to not burn with it.

But we can recognize that we too are embers. We can succumb to it or we can own it. We can stand in awe of fire once again instead of passively consuming it.

We can re-emerge with the wild. We can become the friction: we can become the fire.

It begins when we stop ceding ground. It begins when we uncover our roots and become grounded again. When we rebuild community and find ourselves within it. When we realize that we aren't going to do all of this alone. When we realize that we aren't alone.

Gathering dust. Increasing friction. Stoking the flames.

Becoming wildfire.

It's an honor to open another issue of *Black and Green Review*. We have grown in size, as should be noticeable, but we've also given a little more breathing room and switched to an annual publication instead of bi-annual.

As the world gets harder to keep up with, the exhaustion can become overwhelming. That is the feeling I got pretty universally over the past year as we pulled this issue together: how to stay focused as things get worse daily. I don't have an easy answer here. I'd be lying if I said that maintaining attention isn't constantly more difficult.

Yet there's never been a more crucial time to stay on point and to not let up. In a flood of unending wretchedness, so much can slip through the cracks. Under pressure on all sides, it gets harder to keep track of what ground you're standing on.

And yet the shape of resistance reemerges in an old form: communities of resistance, most notably in the form of blockades. The

weaknesses of civilizations have always laid in their ability to harness energy and sustain themselves. There have always been those who starved the machine and bled its infrastructure. Their successes boiled down largely to how much life a civilization is willing to throw onto its sacrificial altar.

At this point, the programmers, politicians, and priests have shown their willingness to sacrifice everyone else. The question is, how much longer they can hold out? How much longer can they pretend that our world isn't burning? How much longer they can pretend to not see that the threat a significantly hotter world is killing their crops? How much longer they can build and enforce borders as current and future climate refugees render them obsolete?

For better or worse, we all live in a very unique time. A time of unthinkable devastation, teetering on the edge of mutually assured destruction, either nuclear or ecological in nature. Our goal isn't to pretend that things are or will be okay, but our fight is to show that we are closer to home than we have been trained to see.

There are no guarantees, there may be no victories, but the wild beckons. It still exists. It still fights. It demands that we stop ceding ground: that we burn the machinery of civilization to the ground.

Our goal with *Black and Green Review* is to show that we aren't alone. We don't have to pretend that we are anymore. The fight is ours to join again.

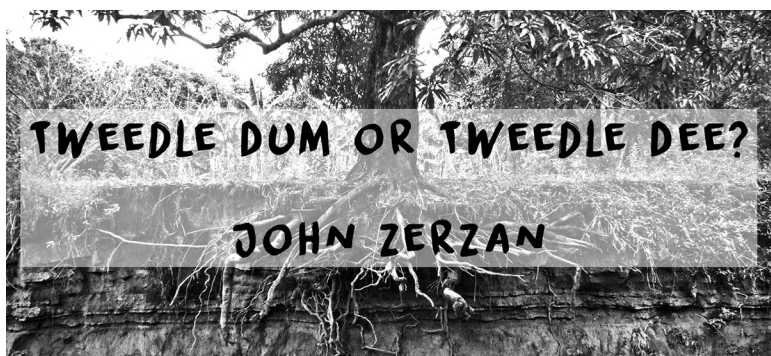
For a wild existence through passionate resistance.

Black and Green Review is an annual publication of Black and Green Press. The editorial collective is Kevin Tucker, John Zerzan, Four Legged Human, Cliff Hayes, and Lilia.

For information on submission guidelines and deadlines, please see the website for details. The very tentative deadline for number six is September 1st, 2018. As always, that is subject to change.

For information on distribution or to order back issues and other Black and Green Press titles, check the website or write to us using the contact information below.

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The Left, pillar of civilization and mass society, has been fading. Some traditional anarchists still cling to it, but a larger number of anti-authoritarians identify as “post-left” (whatever that may exactly mean).

With Trump, however, the Left seems to have acquired a new lease on life in the form of Anti-fa, or anti-fascism. And now we see how thin the popular “post-left” description actually is. Anti-fa is based on two beliefs: Trump is a fascist, and world fascism is on the rise. Very alarming and cause to drop, or greatly de-emphasize, anything else. Of course, neither statement is true.

Trump is an authoritarian billionaire with no particular ideological underpinning. Much more like Berlusconi than Mussolini. The spring election in France saw mediocre centrist Macron trounce right-wing Le Pen. Alt-right rallies in the U.S. usually require police protection.

Militants of the Left, from liberals to Stalinists, have joined the anti-fa bandwagon. Plenty of anarchists, too. The Left populism of *It's Going Down* was already there. Earlier this year the *Earth First! Journal* declared that “EF! is at its heart an anti-fascist movement.”

Anti-fascism, never radical, is an easy way to change the subject from the deep crises of late civilization. Now it's time, we're told, to close ranks against the rising menace. Of course, it does make sense to be hatin' on the hateful racist goons.

But it doesn't make sense to constitute this as the whole of one's outlook, as anti-fa tends to do. There is so much that is far more primary, more deeply determining than the ugliness of Trump & Co. The latter is ugly, but not exactly new. Anti-fa remains on the surface, as if the real problem is a specter confined to the bigotry that's been around for quite a while.

Better to attack at the roots.

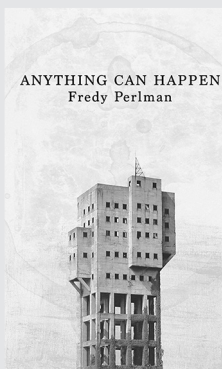
And then there's nihilism, another example of an anarchist milieu

in sorry shape. It is the position of no morality, no program, no goal, nothing agreed upon. A kind of pure negation. But this stance conceals more than it reveals, because there is no pure negation. Every perspective involves normative choices, values, destinations. To deny this is inauthentic. Nihilism often seems a haven for those who have basically given up, who are left with nothing much more than a commonly undefined but heavy-sounding label: I'm a NIHILIST.

Its extreme manifestation—if not its general tendency—is to identify with the eco-nihilists of the ITS variety. Sociopaths who exult in the murder of anyone they happen upon (unless the whole thing is largely a hoax).

To me it's hard to believe that two of the choices most prominent in the anarchist milieu are equally devoid of analysis and inspiration.

New and Upcoming from Black and Green Press

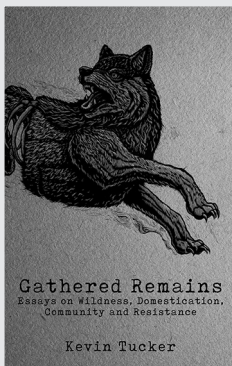


Out now: *Anything Can Happen* - Fredy Perlman

Few have had the impact Fredy has upon anti-civ, anarchist and radical thought. This collection of essays (originally printed by Phoenix Press in 1992) contains Fredy's essential essays that only seem to gain relevance in time. As nationalism and xenophobia flare, few grasped them better than Fredy.

Introduction by Kevin Tucker.

168 pages.



Coming soon: *Gathered Remains* - Kevin Tucker.

A new collection of essays from anarcho-primitivist Kevin Tucker focusing on how our innate wildness is channeled by domestication into supporting the civilization that holds us back as captives and subjugates the wild to its suicidal needs.

Introduction by John Zerzan.

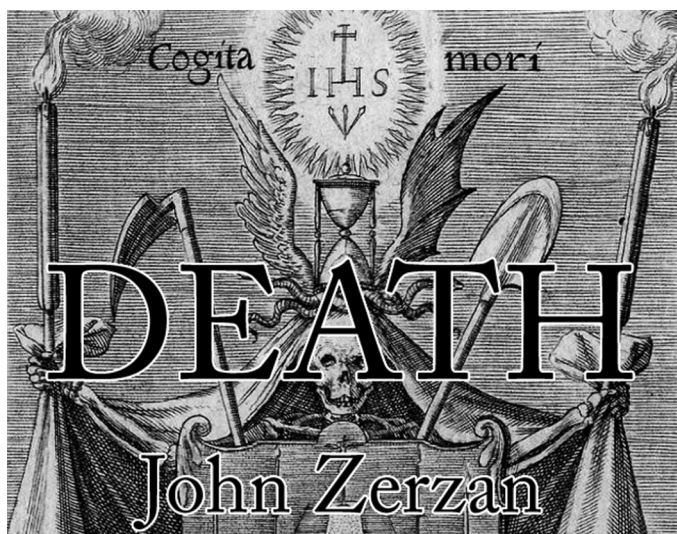
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ESSAYS



Orang Laut, the “Sea Nomads” of Malaysia. Photo by Four Legged Human.



Sooner or later each of us ceases to be. A living organism is one that will die. All life comes to an end. And not just everything living but everything. The Second Law of Thermodynamics decrees doom for everything material. Entropy implies the death of the universe.

How brief and taunting is life, how deep the sea. Death is seldom timely; it often comes too soon and sometimes too late. Does this impermanence, this finitude render life meaningless? For some, life lacks significance if it cannot be objectified and made permanent somehow to memorialize its mortal inhabitant. After all, it is often asserted, the fear of death is the motivation of all human endeavors.

Our mortality may not rob life of meaning, but may instead prompt us to find meaning in life. To go further, could there be meaning without death? Doesn't life have meaning precisely because of death? It intensifies life. The poet Wallace Stevens finds in death "the mother of beauty."¹

Socrates famously proclaimed, "The one aim of those who practice philosophy in the proper manner is to practice dying and death."² In his *Tusculan Disputations*, Cicero likewise said philosophizing is nothing but consideration of death, making ready for death. No-one approaches philosophy that way today, but a fundamental challenge remains--the most fundamental of all.

At the same time we know how difficult it is to cope with the thought of our own death. As Rousseau put it, "He who pretends to look on death without fear lies."³ We go to great lengths to hide from death. We refer to the "dear departed," people "pass on," or

simply “pass.” An increasingly technologized medical terminology has patients “terminating” rather than dying; but blunter words are in constant use, usually with a different, safer referent. For example, a base-runner may “die on base,” or a football game culminate in a “sudden death” overtime.

Thinking about death seems to defy thought itself. It is elusive in the sense that only negations come to mind, only what is not there. And of course, the real elephant in the room is our own death. Aphorist La Rochefoucauld noted, “One cannot look directly at the sun or at death.”⁴ As civilization makes our lives ever more circumscribed, death becomes scarier. The swindle is felt, if not articulated. Is this all we get? Having control of so little in our lives, we don’t even see death as something of our own. “The desire for a death of one’s own is growing more and more rare. In a little while it will be as rare as a life of one’s own,” Rilke wrote.⁵ Octavio Paz added, “Nobody thinks about death, about his own death, as Rilke asked us to, because nobody lives a personal life.”⁶

Anticipation of our death may reveal all too much about what we’ve been allowed to be. We’re not born alone, but we may die alone. More and more of us live alone, and more die, alone, in the technologized hospital that rules death. Grief lurks behind the death culture of technological illusions and separation. Loss pervades our lives.

My guess is that’s what drives the transhumanists’ worship of technology as salvation: in particular their claim that death can be abolished. Immortality is the Holy Grail promised by transhumanists Ray Kurzweil and Zoltan Istvan. Madly delusional, their doctrine shows that the more “advances” in technology, the more fully technology dominates society, the more fear and denial of death is evident.

Turning to the other end of the spectrum, we encounter animals and early human animals. It has been asserted as a given, from Socrates to Freud et.al., that a cardinal difference (perhaps *the* cardinal difference) between non-human animals and ourselves is that the former are unaware of their mortality. But how do we really know this? Françoise Dastur questions the assumption: “it is less than evident that animals have no presentiment whatsoever of their death.”⁷ And as noted above, are we humans even capable of grasping the datum of our death?

For early humans, the general idea of death is another matter. Given that Homo had intelligence equal to ours a million years ago, death must have been plainly observable to them. for Plinio Prioreschi to aver that “the abstract concept that death could occur to all...

must have happened quite late, probably at the very beginning of the dawn of civilization,”⁸ is absurd, a baseless conceit of the civilized. Similarly, Zygmunt Baumann’s idea that only with the appearance of graves did we cross “the threshold of humanhood”⁹ is also misplaced. Early humans almost certainly buried their dead. Sanitation alone required some form of disposal/burial; there is no necessity to impute symbolic thinking to the practice. Burial rites is an oddly popular term in the literature about prehistory, conflating two distinct things. Burials could and likely did take place without rites or ritual. That is, without projecting the symbolic into the practice. A symbolic approach to the cycle of birth and death only definitively entered the picture with agriculture, in the last 10,000 years.

Death arrives as a private and individual event, intimate and incommunicable. It is not abstract; it is seen very differently in different times, places, and cultures. The Aztecs seem to have worshipped death; Egyptians associated death with immortality, whereas their sometime enemies the Hittites and Mesopotamians rejected the afterlife completely. Greek culture in the 8th through 6th centuries B.C. strongly exhibits an acute death-consciousness, while a bit later, the Athenian Epicurus argued that death is an irrelevancy, nothing to be worried about. The Jewish tradition transfers immortality from the individual to community memory, whereas Christianity and Islam stress personal immortality after death.

Through most of the Middle Ages death was a familiar and relatively public event in an individual’s life. Many were present at the deathbed; as late as the 17th century, portrayals of deathbed scenes included children.¹⁰ By the 18th century, while certain themes and rituals persisted, death was being furtively pushed out of the world of familiar things and was becoming progressively shameful and hidden.

Enlightenment denial of the immortality of the soul became the standard philosophical position on death. For Hegel, overcoming death was pivotal to a full life. In the best-known pages of his *Phenomenology of Spirit*, dealing with the master-slave dialectic, Hegel argues that only by confronting “Lord Death” can we fully develop. Death drives thought, and plays a key role in the formation of Spirit—key to the entire Hegelian system.

His friend, lyric poet Friedrich Hölderlin, focused heavily on death; it pervades the pages of his texts. One recurring motif is characters taking their own lives out of a sheer plenitude of existence. “Once I lived like the gods, and more is not needed,” he wrote.¹¹ The

protagonist of *The Death of Empedocles* declares, "For death is what I seek. It is my right."¹²

The bitter pessimism of Arthur Schopenhauer (*The World as Will and Representation*, 1818) pronounced suffering and death the central aspects of existence, the latter being the real aim of life. But by mid-century, philosophy largely avoided the subject of death. Hegel and Hölderlin were dead before 1850, and in society the deathbed retreated further from view.

Friedrich Nietzsche came to reject the death fixation of Schopenhauer and of Richard Wagner as decadent and unhealthy. He has been enraptured with both of them early on, especially with Wagner. Wagner's music celebrated what he saw in Schopenhauer, "the genuine ardent longing for death."¹³ This was exactly what Nietzsche came to oppose.

The seductiveness of dissolution is pre-eminent in Wagner's operas, and of course can be found in such early 20th century works as Joseph Conrad's *Heart of Darkness* and Thomas Mann's *Death in Venice*.

Sigmund Freud elevated the appeal of the end into a psychological axiom, the death instinct. In physics, the goal of any energy process is a state of rest. There are many versions of an analogous, supposedly universal human yearning for primordial unity, a return to a simpler state. But Freud took this much further, claiming that a death drive is central to all life, down to the cellular level. This has seemed hard to follow, even for many Freudians. It seems arbitrary; its late appearance may be due to dark circumstances in Freud's life. The death of his daughter and a grandson, his worsening cancer of the jaw, not to mention the enormity of World War I carnage and rising anti-Semitism in Europe.

Martin Heidegger brings a renewed philosophical emphasis on death through his defining attention to what it means to *be*. Death as the determining factor of selfhood is a key aspect of his *Being and Time* (1927). Our existence is complete only in view of its end; we are free only when embracing our finitude. Not only Heidegger, but existentialism in general had a striking preoccupation with death and its challenge.

As the horrors of contemporary civilization multiply, in an increasingly atomized society, writers largely respond to the idea of death with sadness and despair. Throughout industrialized society there is forgetfulness of death. Where more community and familial activity survives (in Italy, Spain, and Mexico, for example), people

don't flee from death so readily. Philippe Ariès concluded his major historical study of death with the finding that in "the most industrialized, urbanized, and technologically advanced areas of the Western world...society has banished death."¹⁴

Herbert Marcuse was one of the rare thinkers who explored the socio-political dimensions of death, agreeing with Karl Jaspers that "death as an objective fact of existence is not itself a limiting situation."¹⁵ Marcuse condemned death-obsessed western philosophy as missing the relevance of fundamental realities of social existence. As death became more depersonalized in mass society, the sense that we die alone became ever more deeply instilled in us. Thus the natural fact of death becomes denial of death, and partakes of denial more broadly. No domination is complete without the threat of death, and in this way death causes an extra degree of anxiety, within the realm of unfreedom that is domestication/civilization.¹⁶ Shakespeare's *Measure for Measure* dramatizes death at work as an ideology of social control.

Marcuse asserts that in a better world, death could be reduced to its biological reality; the tragic separation of death from life would be greatly altered. Anxiety and denial might be much reduced in a healthy, free context. The natural fact of death need not be a social institution.

Writing about death while feeling healthy is a safe endeavor, one I can approach with equanimity or evenness of mind. It might come out somewhat differently, in a less detached manner, if it were now otherwise for me.

I've had my lows and highs, but mainly have been able to pursue what I've wanted to pursue. It's obvious that not everyone has had that privilege.

Death is the ground and condition of our lives. There is a testing that comes to an end, a kind of responsibility owing to our finiteness. Each of us is irreplaceable, which magnifies the responsibility. "Become what you are," challenged Nietzsche, echoing Pindar.¹⁷ Some counselors ask their clients to write their own obituaries, a summing up as if there is no longer anything that could be changed. What was it all about? A person with unlived lives is much more apt to fear death. One who has never properly lived has no proper time to die.

"Death opens the door to metaphysics. We must be bold and step through it," according to Palle Yourgrau.¹⁸ On a slightly less high-flown plane, Walter Benjamin observed that "Death is the sanction of everything the storyteller can tell. He has borrowed his authority

from death.”¹⁹ Dying simply keeps us from having more of a good life; so thinking about death leads to thinking about what a good life means to us. Quite possibly that boils down to the sheer pleasure of going on living, to see what happens next!

We may be aware that time is just another take on the force-field of estrangement, just another word for it. But in the usual sense of the word, the clock keeps on ticking, often entering without knocking. In André Malraux’s *The Royal Way*, Claude says in terror, “There is...no death.... There’s only...I...I...who am dying.”²⁰ The promise of the challenge endures: “But for your Terror/ Where would be Valour?” asked Oliver St. John Gogarty.²¹

The famous death agony in Tolstoy’s *The Death of Ivan Ilyich* is about terror, and how it is undone by love. His pain at death’s door melts away when he feels the love of a son and a servant. As Gabriel Marcel put it, “to love a person is to say: ‘you shall not die.’”²² How many times do we hear of couples never apart for many years, who when separated die within days of each other?

Dylan Thomas praised his father’s final fury in the poem that ends “Do not go gentle into that good night,/ Rage, rage against the dying of the light.”²³ And yet, as many doctors have reported, most of their patients know they are going to die, and most of them are ready.²⁴

Woody Allen: “I don’t mind the idea of dying. I just don’t want to be there when it happens.”²⁵ But seriously, folks. I think Samuel Johnson had it right when he decided, “It matters not how a man dies, but how he lives. The act of dying is not of importance, it lasts so short a time.”²⁶ Another way to say it is that there can be “a fate worse than death.”

Will there be a final ease, a final understanding? These lines from D.H. Lawrence may be apropos:

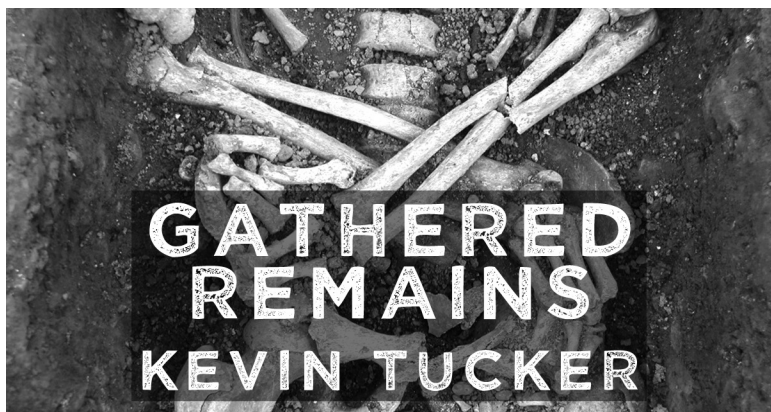
*Swings the heart renewed with peace
even of oblivion.
Oh build your ship of death. Oh build it!
for you will need it.
For the voyage of oblivion awaits you.*²⁷

Endnotes

1 Wallace Stevens, *Collected Poems*, “Sunday Morning” (New York: Knopf, 1971), p. 69.

2 Plato, *Phaedo* (New York: Cambridge University Press, 1993), 64a.

- 3 In Jean-Jacques Rousseau's *Julie, or the New Eloise*, quoted in D.J. Enright, ed., *The Oxford Book of Death* (New York: Oxford University Press, 1983), p. 22.
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- 5 Rainer Maria Rilke, "The Notebooks of Malte Laurids Brigge," in *Rainer Maria Rilke: Prose and Poems* (New York: Continuum, 1984), p. 6.
- 6 Octavio Paz, *The Labyrinth of Silence* (New York: Grove Press, 1985), p. 57.
- 7 Françoise Dastur, *Death: An Essay on Finitude* (Atlantic Highlands, NJ: Athlone, 1996), p. 6.
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- 9 Bauman, *op.cit.*, p. 51.
- 10 Philippe Aries, *Western Attitudes toward Death: From the Middle Ages to the Present* (Baltimore, MD: The Johns Hopkins University Press, 1974), p. 12.
- 11 Friedrich Hölderlin, "To the Fates," quoted in Walther A. Kaufman, *The Faith of a Heretic* (Princeton, NJ: Princeton University Press, 2015), p. 370.
- 12 Hölderlin, *The Death of Empedocles*, quoted in Leslie Hill, *Blanchot: Extreme Contemporary* (New York: Routledge, 1997), p. 245.
- 13 Richard Wagner, *Wagner on Music and Drama* (New York: Da Capo Press, 1988), p. 270.
- 14 Philippe Aries, *The Hour of Our Death* (New York: Knopf, 1981), p. 560.
- 15 Herbert Marcuse, "Human Death," quoted in Jose Ferrater Mora, *Three Spanish Philosophers: Unanuno, Ortega, Ferrater Mora* (Albany, NY: State University Press of New York, 2003), p. 176.
- 16 Marcuse argued in *Eros and Civilization* that we could have civilization without its excess of repression. Given that civilization exists because of domestication—control at a fundamental level—his argument fails.
- Somewhere he asked how past suffering might be redeemed. Decades after reading this question, its audacity still moves me. Ending civilization would put suffering in a new perspective, in a redemptive light.
- 17 Dastur, *op.cit.*, p. 66.
- 18 Palle Yourgrau, "The Dead," *Journal of Philosophy* 86 (1987), p. 84.
- 19 Walter Benjamin, *The Storyteller: Tales out of Loneliness* (New York: Verso, 2016), p. 7.
- 20 André Malraux, *The Royal Way* (New York: Smith and Haas, 1995), p. 290.
- 21 Oliver St. John Gogarty, "To Death," quoted in Enright, *op.cit.*, p. 40.
- 22 Quoted in Prioreschi, *op.cit.*, p. 30.
- 23 Dylan Thomas, "Do Not Go Gentle into That Good Night," in *The Poems of Dylan Thomas* (New York: New Directions, 2003), p. 162.
- 24 Arnold A. Hutchnecker, "Personality Factors in Dying Patients," in Herman Feifel, ed., *The Meaning of Death* (New York: McGraw-Hill, 1965), p. 238.
- 25 Quoted in Alfred G. Killea, *The Politics of Being Mortal* (Lexington, KY: University of Kentucky Press, 1988), p. 1.
- 26 Quoted in Enright, *op.cit.*, p. 53.
- 27 D.H. Lawrence, "The Ship of Death," in *The Complete Poems of D.H. Lawrence* (New York: Viking Press, 1964), p. 960.



*Out there walking round, looking out for food,
A rootstalk, a birdcall, a seed that you can crack
Plucking, digging, snaring, snagging,
Somehow getting by.
No good out there on dusty slopes of scree—
Carry some—look for some.
Go for a hungry dream.
Deer bone, Dall sheep,
Bones hunger home.
Out there somewhere
A shrine for the old bones,
The dust of the old bones,
Old songs and tales.
What we ate—who ate what—
How we all prevailed.*

-Gary Snyder, 'Old Bones: For Paul Shepard'¹

The story of our lives is written in fragments.

Each of us carries the lineage of millions of years of evolution within us. Our past, even prior to anything resembling our contemporary human form, shapes how we see the world. How we interact with it. How we interact with each other.

The story we are told, the narrative driven into our lives, is that this lineage is a process. That we are the outcome of evolution: not just the most current rendition of it. That thought grants pride and privilege. It has allowed us to draw maps and then to shift the lines according to geopolitical interests. To wage wars. To conquer and colonize other parts of the world and their inhabitants.

That narrative fractures a living world into pieces.

At its core, it dispossesses us so that we can displace and destroy the world that created us. It is a veneer that we place over a confusing and contradictory situation where we are still present in the place where we once thrived, but connected to it only as an ideal or through mediation. That is, if we show any cognizance of it at all.

It is a heavily catered vision. One that must compete with living in a hyper-technological and inter-connected globalized society. Each of us is a bastard of history: an amalgam of colonizer and colonized, dispossessor and dispossessed. Every one of us a fragment of the world civilization has created, comprised of the shattered remains of living worlds.

That is true for me just as much as it is true for you.

And just as much as it was true for Ken Saro-Wiwa.

I never met Ken Saro-Wiwa, but the intersections of our lives and, subsequently, the end of his life begin at the gas pump.

Civilization creates a situation where our reach as individuals is amplified exponentially. Any time we take part in the technological hubris we surround ourselves in, there is a string stretched throughout time and place. The fabric of that thread is shattered lives and decimated ecosystems. Tragedy on a local scale supported by international powers. Every point in our lives can be anchored back hundreds to thousands of years.

Ken was born in 1941, a member of the Ogoni people in Nigeria. The Ogoni live in what is known as Ogoniland in the Niger Delta. This is a region, like all others, that is shaped by history. Ken was born in Bori, a small town near the coast: an area that had been a part of the indigenous Ibani kingdom as far back as 1000 AD. The Ibani were a tribe of the maritime-agrarian Ijaw peoples who had built an elaborate inland society and used their tributary port access to strong-arm regional control.²

Europeans would eventually know the resulting city-state, Oko-lo-Ama, as the Kingdom of Bonny.³ But prior to the Europeans, the slaves captured by the Ibani were sold to Muslim slave traders into Egypt and the Mediterranean.⁴

Fast forward to the close of the nineteenth century; Bonny becomes a protectorate of Britain.⁵ As the slave trade wanes, the use of slaves for procuring coal rises. In 1912, a British mercenary, Frederick Lugard, founded the city of Port Harcourt: new management for an old kingdom.⁶ By 1916, the capital of Nigeria, Lagos, looked like a

European city, but only for the white population. Now governor, Luggard claimed that the colonized “neither appreciates nor desires clean water, sanitation or good roads and streets.”⁷

Pull on any of these strings and the fragments continue to pile up.

This is just a glimpse of the stage set when, in 1956, Royal Dutch Shell strikes oil in Nigeria. Long-standing tensions continue to rise and culminate in a civil war that left somewhere between five hundred thousand to two million Nigerians dead. Most of those deaths were caused by starvation.⁸

Ken is now a teenager.

This background didn’t need another natural resource thrown into it, but that is exactly what it got. The deployment went as most would expect: horribly. And horribly violent.

Statistics from the Nigerian Department of Petroleum Resources “indicate that between 1976 and 1996 a total of 4,835 incidents resulted in the spillage of at least 2,446,322 barrels (102.7 million U.S. gallons), of which an estimated 1,896,930 barrels (79.7 million U.S. gallons; 77 percent) were lost to the environment.”⁹ Presumably less shocking, even though oil accounts for 90% of Nigeria’s exports, 80% of those funds go straight to one percent of the population. Between Nigeria’s independence, in 1960, and 2012, \$400 billion dollars are considered “stolen or misspent.”¹⁰

The Ogoni people were left on the frontline of an oil extraction frontier. Pipeline blowouts became common. The water undrinkable. Fishing became impossible. The fields infertile. Ogoni and Iko peoples demanded that Shell clean up their homes in 1970, 1980, 1987, and again in 1990. They were met with force. Corporate heads spoke from atop the high horse of the economy to their shareholders: everything is fine.

Everything was not.

In 1990, Ken, now an accomplished television writer and playwright, becomes central in the formation of the Movement for the Safety of the Ogoni People (MOSOP). MOSOP is a council of elders and chiefs seeking the protection of Ogoniland and the Ogoni people from Shell and other oil companies. Thirty-three years of oil extraction had decimated the land.

In Ken’s words: “All one sees and feels around is death. Environmental degradation has been a lethal weapon in the war against the indigenous Ogoni people.”¹¹ His words weren’t hyperbole. At the end of October 1990, there was a massive protest outside of a Shell facility, just east of Port Harcourt. Shell requested the Mobile Police Force to

assist and 80 unarmed demonstrators were killed, hundreds of homes destroyed.¹²

This happened again and again.

The Ogoni spoke up. Shell and its militarized agents killed and suppressed. Ken was detained and released. Elders and chiefs were killed. Rinse, wash, repeat. One of the chief embezzlers of Nigeria's oil wealth, Sani Abacha, seized power in 1993. He vowed to crack down on any resistance to his revenue streams and whatever ecological hell they might entail.¹³

Just after New Years 1993, disturbances of oil production were declared treason. MOSOP continued its protests. Arrests, legal battles: releases, seizures, and mass killings. Oil flows, money siphoned off, the situation continues to worsen.

Across the world, in the United States, all of us are unknowingly fueling this conflict every time we pump gas at the station.

Round and round we go.

In 1994, Ken and the "Ogoni Nine" are locked up over the false murder charges of four Ogoni chiefs. This time, it's for good. Before they were hung on November 10, 1995, Ken spoke these words in his final statement:

*The Company has, indeed, ducked this particular trial, but its day will surely come and the lessons learnt here may prove useful to it for there is no doubt in my mind that the ecological war that the Company has waged in the Delta will be called to question sooner than later and the crimes of that war be duly punished. The crime of the Company's dirty wars against the Ogoni people will also be punished.*¹⁴

Ken was 54 years old.

Bones Hunger Home: The Power of Narratives

History does not belong only to its narrators, professional or amateur. While some of us debate what history is or was, others take it in their own hands.

- Michel Rolph-Trouillot, *Silencing the Past*¹⁵

It's now been 23 years since Ken's statement and execution.

Not only has Shell's day not come, it most likely won't. There will be no truth and reconciliation with Shell, no justice for Ken even with

a posthumous Nobel Peace Prize for his efforts.

Intersected though our lives may be, the civilized world is absolutely dependent upon oil. So it will cling to and propagate any mythos that keeps us going to the gas pumps and bury any evidence of what it takes to get that oil across the world, into your gas tank, then back into our atmosphere where we all have to live with its consequences once again.

The pieces are there, but unable to see them, we are ill equipped to put them together. We are unable to understand a world that is infinitely closer to our reach than it was ever meant to be.

At the time of Ken's death, I was aware of who he was. I was aware of the Ogoni and Shell's role in the most contemporarily orchestrated variant of Gold Coast exploitation. I had read about him and his execution only because it was information I had sought out. It wasn't in the news. It most certainly wasn't at the gas station.



Oil spill in Ogoniland.

I would cross paths not with Ken, but with MOSOP and hundreds of Ogoni refugees. They literally wound up in the same city as me for reasons that show the interwoven world of a global civilization as both large and small. The Ogoni I met had escaped Nigeria, their home. It was stay and fight with a price on their heads or leave.

They left. That is, those that remained left.

Of all places, they chose St. Louis, Missouri. Along with civilization's stick, the Ogoni got a glimpse of its carrot of choice: sugar. C&H sugar to be exact. C&H was headquartered in St. Louis, as evidenced by the address listed on the packaging that the Ogoni were familiar with.

Oil came from Ogoniland and, when they lived there, they

couldn't avoid the stuff even though they tried. Pipelines crisscrossed the towns and villages. They would burst or rupture regularly. The local police were Shell's paramilitary. If you wanted oil, and the Ogoni certainly didn't, it was everywhere. It stands to reason that if sugar came from a company in St. Louis, it would be everywhere there as well. Needless to say, it wasn't.

More fragments, more strings.

Here was a crash course in the strange world of global economics. While there were sugar refineries in St. Louis, none of it was grown anywhere remotely close.

Sugar cane was first domesticated in Papua New Guinea.¹⁶ The Muslim slave traders, whom the Ibani kingdoms had bartered with, subjected slaves to a Mediterranean sugar cane industry. In 1000 AD, few Europeans had any experience with sugar cane. But as industrial methods of extracting sucrose—a form of sugar—from sugar cane arose, so too did the plantations. In England, sugar became a treat of the nobility by 1650. Come 1800, it had arisen to a costly necessity for all the English. By 1900, sugar supplied one-fifth of the calories in the English diet.¹⁷ Not to be outdone, studies in 2012 found that Americans were each eating an average of 130 pounds of it *annually*.¹⁸

Columbus carried sugar cane to the New World on his second voyage in 1493. And in 1516, the Spanish colony of Santo Domingo had started shipping sugar back.¹⁹

The sugar plantations were a major player in the Atlantic slave trade. Slavers were very specific about sugar production, arguing that only Africans were suitable slaves for working the cane fields. George Whitfield, a Calvinistic Methodist slaver of the eighteenth century, stated plainly that cane “cannot be cultivated without negroes” due to the extreme heat and exhaustion.²⁰ There's some comfort knowing he's dead, but clearly death didn't come early enough for him.

And where did many of those enslaved Africans come from? The Niger Delta—which would come to be known as the “Slave Coast” for some time—provided many, if not most. After the Mediterranean slave trade began to die down, the native kingdom of Benin was selling pepper and slaves to the Portuguese, ultimately becoming the first Slave Coast power to obtain their own firearms.

The guns furthered the Benin expansion eastward beyond Bonny—just south of Bori, where Ken was born—becoming a major source of slaves for the Atlantic trade by the seventeenth century.²¹ Old Calabar, a port region towards the east end of the Niger Delta, exported an estimated 250,000 slaves between 1650 and 1841 alone.²²

From Africa, slaves were sent to work plantations in the tropics, namely South America and the Caribbean.

While no Ogoni were reportedly brought into the slave trade, the impacts were unavoidable.²³ Slaves became the wealth to barter in a world where sugar would become exponentially important both as a tool of trade and as a source of enslavement. The carrot and the stick: forever bound together. Sugar and oil: my world and the world of the Ogoni intersected once more.

I spent years demonstrating with MOSOP.

A number of the men behind it were to be killed by the military junta General Abacha led. They had run to the hills when the Ogoni Nine were locked up, plotting their own exile while their families prepared to leave the very place they had fought and died for. Having faced military puppet tribunals and trigger-happy agents of Shell, no amount of confrontation was going to rattle them.

I've seen them smile calmly while racist, white suburbanites tried to run them down with their cars or provoke fights. I've never had their restraint nor personally understood it, but by comparison, it's most likely a drop in the bucket for what they had experienced. These were people who literally had their lives on the line, had lost friends and family at the hands of an oil company. Here they were, being confronted by people who wished death upon them solely for continuing to exist. More than that, they were a reminder of the price tag that doesn't show up at the pump.

Even there, this is just a piece of it.

And this is just one tiny fraction of one story. It's hardly just Shell and it's most definitely not just the Gold Coast of Africa, even if the history there should be enough to undermine every myth of civilization.

The reaction coming from drivers angry that someone dared to rain reality on their charade is the anger of having their comforts confronted. And it is an uncomfortable feeling: having the sanctuary of the Self we're sold violated by reminders that none of us are an island nor isolated.

Our lives are complicated by an exploitative network that expands well beyond our vision and grasp. None of us are ever freed from the consequences that come with civilization. We just relish in the false sense of security we are afforded.

The ability of not having to confront that reality is a privilege, not earned, but given. It carries no true sense of safety, but it offers the delusion that we have choices and that we can reap the rewards if

we're willing to play along. Those of us in the First World aren't, after all, the Ogoni. Even though the cops were always on guard to defend the helpless Shell stations we demonstrated outside of, they weren't militarized.

And they weren't wearing Shell badges.

So what's the point? What's the point of this story or of any other like it? What is the point of pulling the strings when we feel we don't have to?

Even amongst radicals (often especially), these are the kinds of questions that this bit of history might be met with. That we can even ask the question is enough justification for why we should dig deeper. It boils down to this: not only are narratives important, but history is living. Nothing that has happened is simply done and over with. Things morph, politics, economics, religion; these core institutions might change face, but they never change their form and function.

It is the epitome of modernity's apathy that we can disassociate our lives from the consequences of our role within civilization's perpetuation. This isn't a one-sided issue, even though it's clearly more heavy-handed on the side of post-consumer societies where there's a ludicrous amount of stuff and, even when broke, there's still a lot of options for debt. To be honest about where that comes from and where we are headed seems like a good place to start.

Going beyond angry, racist suburbanites, you can look directly at the military-corporate institutions in Nigeria, to the coal barons and slave brokers before them, and to the slave-owning agrarian kingdoms before them and see that narratives matter. The very prospect that the divine rights of kings, capitalists, and priests may be rendered void and useless by the presence of free, egalitarian or, even, more ecologically sane societies is absolutely important.

The existence of power relies upon physical infrastructure, but it's demand for obedience and subservience is what keeps it running. All these fragments, all these pieces and remains of a world without political and economic power, not only undermine those narratives, but they indicate weaknesses.

Even with just a brief glimpse, it is easy to see that oil, like all extracted energies, is a glaring example of that.

And beneath that surface of petro-politics and conflicts, at every single step, there is another piece of this world, more intact, more diverse, more alive. This world is living. Our world is alive. Clearly, it struggles with what we've thrown at it, but it doesn't give up.

It doesn't create philosophical or moral principles to stop its functions. It has no mind: it has no Self. Our world is a network of integrated, ecological networks and feedback loops. The more we come to know, the more we realize how little we understand about these connections. It's a habit we learned well from resource-bartering slave traders, forager-killing farmers, forest-decimating organic palm plantation owners, from those wielding bibles and swords or those yielding credit default swaps and structural adjustment policies.

Our reality stands upon scar tissue: scorched earth covered in Astroturf. Wounds inflicted in layers. What isn't dead or enslaved is buried in plain sight. Struggling, but not dead.

Yet.

And, if you're reading this, neither are you.

This is why we dig.

The World As It Is

To know the name on the door is to know nothing. Knowledge begins on the other side of the threshold.

- Fredy Perlman, *Against His-Story, Against Leviathan*²⁴

As an anarcho-primitivist, I want to see civilization undone. Completely. Buried in its ruins. That is the fate ensured as storehouses, fields, and diverted waterways led to the mathematically impossible equation of infinite growth on a finite planet.

Every step intensifies, but all victories for civilization are temporary.

As those fragments surround us, we don't have to pull many strings to arrive at the conclusion that civilization and domestication haven't done much for us, as individuals and as societies, most definitely not as living beings. Digging isn't necessary to get to that outcome. Subjective experience is a good point of departure. If you find yourself digging, ostensibly subjective experience got you started.

Subjective experience, however, is not enough.

My connection to Ken was objective, not subjective. Subjective came later, long after civilization had dominated the Gold Coast, significantly after the trade of humans turned to the reality of coal extraction and then, subsequently, oil. The impact of my life hit Ken long before a noose ended it.

That was a conclusion that all of our intertwined lives ensured.

The reality we live in is far more muddled than the reality our

minds and bodies were shaped in. As nomads, our realm of understanding spreads fairly wide. As foragers, that realm expands above the tree line and beneath the soil. As hunters, it moves into the will and intents of other species. We quickly unfold into our surroundings. So when I say that our consciousness defaults bioregionally, even that lacks any real discernable boundary.

Our ancestors—and relatives who still struggle to maintain their wild communities against the intrusion of civilization—lived without concepts of history. Or future. Time existed on a continuum. Numbers were for accounting a surplus they didn't need. Calendars were for agrarian schedules they had no use for. Without technology, they weren't likely to bring about ecological or social change to radically upend what millions of years of adaptation and resilience bred.

Past, present, and future lived in one place. And without contradiction.

The foragers may have never known about the lives thousands of miles away from them, but there was no necessity to do so. Curiosity withstanding: myths certainly sufficed. Not being able to negatively impact their existence, they didn't have to philosophize about morality and consequence. There was no need to justify action or inaction.

For us, we are left with the baggage that civilization carries.

There is no biological or ecological precedent that explains my relationship to Ken and the people of Ogoniland. That is a historical situation. A purely civilized predicament.

In the want to undo the domestication process, the world of the immersed hunter-gatherer is closer to me than Ken was. It calls. For anthropologist Stanley Diamond, that primal urge is “consonant with fundamental human needs, the fulfillment of which (although in different form) is a precondition for our survival.”²⁵ It manifests itself organically in the way our eyes move and the way that our bodies want to run; down to the way that our ears absorb information and that technology overwhelms our reaction to it.

We may consider ourselves the beneficiaries of thousands of years of civilized progression, but our minds are pacing just the same as the captives in zoos and farms.

While the means to walk away from domestication are easily at our disposal, literally in the case of our legs, to unearth them we have to remove the concrete poured over them. Even then, we're only more likely to see the concrete pen that we live in. Walking away isn't liberation. Even where it is possible, it remains illegal. I don't believe the

law merits respect, but, like all of civilization, we aren't simply going to will it away. And the reason why anti-economic subsistence is illegal brings us right back to why hunter-gatherers were buried in the first place: the narratives underlying domestication were never strong enough on their own.

I'm not speaking historically here.

This is a situation that the Bushmen, nomadic hunter-gatherers of the Kalahari, now face.

The Bushmen were forced into the crosshairs of civilization on numerous occasions. In 1652, following the enthusiastic prospects reported by formerly shipwrecked Dutch slavers, the Dutch United East India Company built a fort in what would become the Cape Colony of South Africa.²⁶ This was an area occupied by the Bushmen's pastoral neighbors, the Khoikhoi, after being pushed further south by the agrarian Bantu empires in the third century AD.

Genocide follows colonizers. Neither count was an exception.

The Company inevitably expanded. Between 1703 and 1780, the white population had grown tenfold in the region, encroaching with gusto into the lands of the Bushmen. They did what colonizers do best: systematically exterminate any living thing. By the 1770s, the Bushmen were forced to resist the colonizers. They began killing the expanding pastoralists' cattle and sheep, being met, in turn, with genocidal force. Commandos had killed 503 Bushmen by the end of 1774, further enslaving 241 others.

The Bushmen continued to fight back, but the colonizers had the numbers and technology to decimate:

*According to official records, between 1786 and 1795, Bushmen killed 276 herdsmen and captured 19,000 cattle and 84,000 sheep; the commandos, for their part, killed 2,480 Bushmen and captured 654 others. With official permission, Bushmen children were indentured on white farms.*²⁷

The Bushmen, often considered over-romanticized and idealized for their degree of sheer egalitarianism, prevalent for years after violent confrontations and incursions, rightfully deserve credit where it is due. That the egalitarianism implicit in their nomadic hunter-gatherer lives could overcome such history isn't just exemplary of their demeanor, but of the resiliency of the wild, anarchistic human spirit.

And tested it most certainly was.

Towards the end of the nineteenth century, the modernizing,

technological precision that Germans would celebrate with the Holocaust was being field tested in Namibia, the western expanse of the timeless land of the Bushmen. Beyond them lay the lands that the pastoral Herero took up residency in during the seventeenth century. Then the ambitions of German colonialists had outgrown the outposts that they had established in 1882.

In 1903, the German General Lothar von Trotha was leading those commands. Not to muddy his intents, Trotha was clear on the matter: “I wipe out rebellious tribes with streams of blood and streams of money.”²⁸ Here the arms that came to define World War I, such as the Gatling gun, were used to decimate entire villages.²⁹ Entire societies. Entire cultures. The slave trade was largely gone: this was extermination.

Genocide.

By 1905, all Herero land was formally expropriated. By 1907, the same was true for nearly all Nama lands. In 1912, the Germans erected a statue memorializing the dead colonizers in Windhoek, at what was formerly a concentration camp for the remaining Herero. The German governor, Theodor Seitz, declared at its unveiling that: “The venerable colonial soldier that looks out over the land from here announces to the world that we are the masters of this place, now and for ever.”³⁰

A hundred years later, I would like to state that forever is a bold statement in a timeless land. German control was lost after World War I. Ceded to British-South African forces, we know full well that the new management weren’t particularly kinder.

Keep pulling the strings...



Reiterdenkmal monument to colonizers at Windhoek.

The Herero that survived the Germans did so by flooding the Kalahari, the land filled with the Bushmen, whom they called *Ovakuruha*, the First People.³¹

And the Herero feared them.

Like all agrarian and pastoral societies, the Herero viewed the Bushmen as wild. In the words of a Ju/'hoansi living at Nyae Nyae, "To them it is nothing to take our land and our blood."³²

Like the Dutch before them, the Herero colonized the Kalahari. Fearing, as all farmers do, that wild predators would decimate their cattle and sheep, they left poisoned carcasses to eradicate them. As with the Dutch, they decimated the ecology wherein the Bushmen existed. The cycles of oppression and repression continue to flow downhill. Colonized becoming colonizer.

The Bushmen survived, once again, but colonization continued to modernize.

By the mid-twentieth century, that included forced settlements, missionary and corporate incursions, and increased military presence. The impact was immediate.³³ A partial response was the creation of the Central Kalahari Game Reserve in 1961. It was a move not unlike the creation of reservations for indigenous communities in the wake of globalizing colonizers across the earth.

True to form, the state determined that the allure of the Bushmen was a sufficient stand in for the actual presence of living subsistence hunters in the region they had occupied for upwards of hundreds of thousands of years, if not more. Their story was better off as history than reality. The narrative could remain nostalgic without shaking the bravado of the conquerors.

In the mid-1990s, the tourism industry forced the remaining Bushmen out. Hunting was possible by permit only.

Overnight, the Bushmen became poachers for doing what they had always done. Twenty years of legal battles later, even after rights are partially given back in writing, the beatings and arrests of subsistence hunters goes on undeterred.³⁴ Children raised in settlements require permits to enter their ancestral lands.

Who are buying the permits? Wealthy First World trophy hunters.³⁵ Not unlike the background in the Nigerian Delta, where Ken was born and lived, Botswana doesn't make its money from tourism. Three quarters of the nation's exports are diamonds.³⁶ DeBeers has a notoriously bad history in this regard. But while the Bushmen continue their fight to subsistence hunt on lands touted in their visage, just this year, a Russian-British diamond firm was given six new prospecting licenses.³⁷

Like Nigeria, the pillage certainly doesn't end there. Just over the last decade, the government of Botswana began issuing permits to use hydraulic fracturing, or fracking, for natural gas. Not one to miss

an opportunity to pillage, of the two firms to chomp at the bit on that include Debswana, a joint venture between the Botswana government and DeBeers.³⁸

The continued existence of an iconic society of hunter-gatherers, one of the oldest in the world, even in the second largest wild reserve in the world, is simply too much for civilization to bear. Mining diamonds and devastating the land for natural gas are seemingly compatible with the tourism the Kalahari has to offer. If you have the money, you can even get in on the hunt. If you don't, you face beating and imprisonment.

These laws were put in the books intently. And universally.

We play along with civilization because we believe we have the choice. We choose not to see ourselves as conscripts of civilization. If you want to step out of line, then coercion looks different. Privilege, in this world, is measured in how long you can escape capture and persecution. Effectively speaking, that's only as long as you remain a loner skirting the edges of the wilderness at best. Try to rebuild community and things will look vastly different. Genocidal.

In Ken's case, you don't even need that extreme. The agrarian civilization of the Ogoni people couldn't even stand a chance against the oil industry.

Freedom, the much-vaulted pride of civilization's intellectual development, is just another commodity. If you make enough money to afford it, you've already been bought. And no amount of Kalahari big-ticket trophy hunts will change that.

This is just another incidence of subjective versus objective experience. In this case, the subjective experience is based off of what you might get away with. And for a number of us, quite frankly, that can be pretty extensive. Plenty of people have gone off, in true lone wolf manner, and existed without civilization until they died.

Most often, that's exactly where that subjective experience ended.

Based on that alone, we miss the big picture. We miss the tie that binds us as captives. We miss the links between our lives and the slaves working in shanty diamond mines, the conscripts of warlords that organize and facilitate them, or the lives of indigenous societies with burst oil pipelines on their native lands and paramilitaries set in place to defend them.

The narrative of civilization is that you are important. The reality of civilization is that you are anything but. Workers, consumers, producers, farmers, or whatever title we get stuck with: we serve the bottom line. Otherwise our bodies become the foundation of our

fairly tales about freedom. We can tell ourselves any story about our own experiences, but this is what they are, all with varying degrees of severity.

This is the world as it is: as we have inherited it.

This is the world that civilization has created.

Alive and bearing scars. Struggling, yet existing. Damaged, but not gone.

Strung together fragments of history, though we may be, our strings remain.

A Shrine for Old Bones: Unraveling History

Anthropology, abstractly conceived as the study of man, is actually the study of men in crisis by men in crisis.

- Stanley Diamond, *In Search of the Primitive*.³⁹

In pulling on these strings, we do have tools at our disposal.

And they are far from perfect.

By 1938, both Nigeria and the Kalahari were British protectorates.⁴⁰ The export of palm oil from Nigeria was increasing alongside the rise in plantations of cocoa—brought from the Amazon River basin in the 1870s.⁴¹ In the same year, we have *Kristallnacht* in Germany and Adolf Hitler named “Man of the Year” by *Time Magazine*.

And in Port Austin, Michigan, Napoleon Chagnon is born.

Chagnon is an anthropologist. Like the other colonizers mentioned already, he’s no less a piece of shit. In 1968, as the world was undergoing an era of revolution of thought and praxis, unweaving the narratives of civilization in some places and strengthening the resolve of an industrializing, globalizing world with socialist vigor in others. Chagnon was making headlines for other reasons. Carrying on the narrative-building legacy of civilizers before him, Chagnon unleashed his contribution to their cause, the ethnography *Yanomamö: The Fierce People*.⁴² A book that was and still is a standard in university classrooms worldwide.

The Yanomamö are a tribe of horticulturalists living in the Amazon, on the border of what would become Venezuela and Brazil. The history here is unsurprisingly, yet awfully, familiar.

Between 1630 and 1720, slave-hunting conquistadors decimated indigenous societies all along the Amazon River.⁴³ In the 1800s, Westerners finally found an industrial application for the rubber sap that Christopher Columbus had brought back from the New World. The

industrialists' couldn't be satiated. The carnage unleashed during the Amazonian Rubber Boom (the first from 1879-1912, and the second from 1942-1945),⁴⁴ in the words of anthropologist Wade Davis, "were like nothing that had been seen since the first days of the Spanish Conquest."⁴⁵

Using the lightweight and easily maneuverable planes innovated by the Second World War, missionaries got another wind as the forerunners of colonization, clearing the path for a new wave of industrialists and civilizers to tighten their grasp on the Amazon.⁴⁶ Before Chagnon showed up in the mid-1960s, New Tribes Missions, the Society of Jesus, and the Silesians' had already been out to conquer souls for nearly a decade and a half. The "savages," once saved, could make perfectly good workers: salvation through wage slavery. Perhaps even more telling, the existence of steel tools and other manufactured goods had already invaded the Amazon for some time, "frequently even beyond the memory of the oldest informants."⁴⁷

The stage was set. The routine was underway.

The process of colonization doesn't demand the physical presence of the colonizers. Their technologies, their vices, their grains and alcohols, and, most commonly, their diseases, can do a lot of the leg-work for them. Virtually everywhere that Westerners have gone, the tide of contact was cast far beyond their actual movements. In what became the United States, the demand for fur and the introduction of trade goods—most notably, guns—led to the complete decimation of entire tribes, hundreds of miles beyond the outposts of white colonizers.⁴⁸

You could see it in Papua New Guinea.⁴⁹ You could see it in New Zealand.⁵⁰ You could see it further down the Amazon River as it crept into what were once parts of the Incan empire and those who resisted it, the Jivaro.⁵¹

And you most definitely saw it among the Yanomamö.

The Yanomamö, like all slash-and-burn horticulturalists, had warfare.⁵² Unlike nomadic hunter-gatherers, settled or even temporarily settled societies both lose the natural contraceptives that a nomadic life brings and the lack of property or group (tribal) identity that band societies maintain. Outside of the intrusions of farmers and colonizers, for the hunter-gatherer there is nothing to protect and no one to protect it from.⁵³

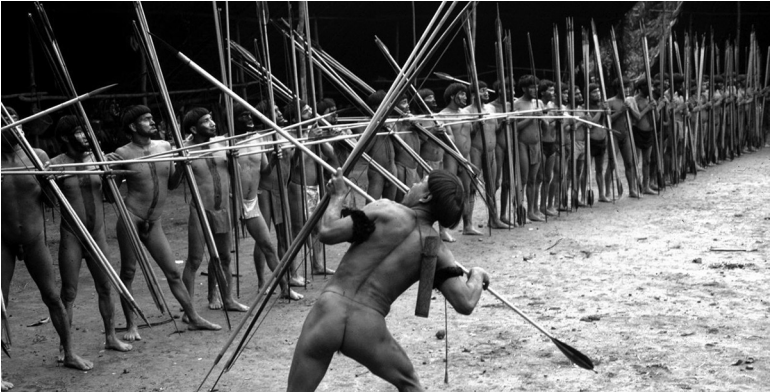
On a certain level, warfare amongst horticulturalists is a leveling mechanism. It keeps expanding populations in check through a

preference for male children (higher rates of female infanticide) and deaths from battlefield and raiding deaths. Preferable or not, it does have a certain degree of ecological and social function. Being social animals, we don't talk in terms of function, we talk in stories.

Social tension is better explained through myth. The more people, the larger the community, the more of a central role myth plays. If neighbors start dying because of ecological pressures, it makes more sense to our storied minds to blame people. Namely, other people.

For the Yanomamö, those other people are witches.

As the diseases of Europeans spread throughout the Amazon, so did their guns and machetes. The Yanomamö responded how they typically had: through warfare.⁵⁴ Only this time, there would be no level of ecological correction. No balance of carrying capacity to be found. The wound greater, the threat more severe, and the technology seemingly endless, by the time Chagnon had come to the banks of the Orinoco River, an area already threatened by numerous colonial intrusions, he found what he had expected to find in the Yanomamö: a pristine society, far from civilization, engaged in a Hobbesian battle to the death.



Yanomamö warriors.

Beyond being an anthropologist, Chagnon is a sociobiologist. The imprint of sociobiologists spans across all of the sciences. It reaches back to the dawn of the Enlightenment, going back to Descartes insisting that the howls of tortured dogs were mechanical in nature rather than emotion, something reserved for humans. Hobbes, ever the philosopher, had given words to the ideology of the farmer: our nature is Nature, one that is fighting tooth-in-claw for survival and victory.

Just like the unflinching pastoralists poisoning lions and killing

Bushmen without thought. Like the Shell paramilitaries shooting down protestors demanding clean water: we kill to know we're alive.

Chagnon was another figurehead carrying forth the narrative of consumable freedoms: you are nothing without us. We, the domesticators, keep you, the domesticated, safe. Play along. Play dead. Roll over.

More myths for a captive audience.

The reality was genocide.

Chagnon went into the Amazon with his mentor, James Neel. Their research was funded and backed by the Atomic Energy Commission. Their goal: to study the impact of disease and contamination on a "pure population." Not only did Chagnon celebrate the warfare unfolding before him, but he directly contributed to it as he and his party literally injected their presence into the veins of this unfolding trauma.⁵⁵

When his ethnography came out, it was the force to combat the increasing radicalization spreading throughout the social sciences and throughout society at large. The waters were already murky, but this is the narrative colonizers-turned-programmers wanted: the fear of our own savage nature.

Some radicals responded by owning it: removing the contexts of post-contact war, the particulars of horticultural subsistence and life that made war even possible. Ultimately flipping the script that Chagnon was the latest author of. Anthropologist Jacques Lizot, living amongst the Yanomamö himself, was a staunch advocate for this decimated culture, but defiantly refused to accept that history might have created and amplified their proclivity for war.⁵⁶

Pierre Clastres, friend of Lizot, anthropologist, and anarchist, went even further on this claim: "Should war cease, the heart of primitive society will cease to beat. War is its foundation, the very life of its being."⁵⁷ Clastres wasn't wrong in showing how the "stateless" societies of non-hierarchical horticulturalist societies were anarchist in nature. Not just "pre-state" societies, but societies actively *against* the state: their refusal of power was cognizant and intentional.⁵⁸ Yet it tellingly only occurred in societies where social power was made possible by a surplus in gardens or in storehouses.

Clastres and Lizot, among many other anthropologists, saw what was happening among the Yanomamö. Clastres saw the influx of Western tools, Lizot saw the decimation at the hands of the missionaries, but neither would see the picture fleshed out decades later by anthropologist R Brian Ferguson, among others: how recently the

Yanomamö had settled, potentially how recent horticulture was for them, and the sheer extent of impact that the dual infusion of Western goods and sickness had upon them.⁵⁹

Had Clastres not been tragically struck down by a car accident, I suspect he might have been more open than Lizot on the matter, but we'll never know.

Ultimately, it doesn't matter. The reality that we exist in is complex. The history is deep. This unending chain of fragments, of genocide and colonization, stands directly in the face of communities that had found their place within their ecology, their spaces.

In light of the level of complexity at the crossroads of our history and our present, a shallow and superficial analysis would lead us to believe that we can't trust anything. That the tools we are given are the master's tools. That using them is simply strengthening their narratives and that the only option ahead is to try to make up our own stories: to try and break out as loners on the edge, perhaps collected in temporary autonomous zones and communes or within the cavern of the Self. That we could just outlast civilization and hope to find our "true" selves in the process.

That is a fantasy, an escape.

Our reality is complicated. It is not only painful: it is actively causing pain. It might be more than our bioregional minds are capable of accepting, but this is the world that we inhabit, the one where each of us carries the weight of civilization alongside the lineage of egalitarian hunter-gatherers and the lineages of the farmers and industrialists that hunted, killed, and caged them.

History, for nomadic hunter-gatherers and small-scale horticulturalists, exists on a spectrum: it exists in places. Past, present, and future meld into each other. The same is true for us, but we have added in layers of misery, pain, suppression and realization. We stopped seeing the flow. We see in moments, in historic time. Lamenting the submission to living within historical times, ecologist Paul Shepard points to the aspects of life that elude us: "Lacking a sense of the spiritual presence of plants and animals of nonliving matter, we do not feel our ancestors watching or their lives pressing on our own as did prehistoric peoples."⁶⁰

At a certain point, trying to find an escape to start anew is a luxury that we can't afford. That is an escape that we arguably didn't deserve in the first place even if it was possible.

We don't need perfect tools; we just need a clearer understanding of their pitfalls. We need a clearer sense of what we're up against.

This isn't an escape. This is an ending.

Anthropology, the study of human cultures, has had many critics. Some of the loudest voices have come from anthropologists themselves.

There is no question that anthropology arose from the colonial encounter. That is a reality that has plagued some anthropologists from the start. Fortunately, many of them acted on it.

This, however, was not always the case, but anthropology certainly has had a lot of shaping from its more radical elements. Among the founders of anthropology, A.R. Radcliffe-Brown was an anarchist in his younger days.

Likewise, the founders of anarchist theory were shaped largely by anthropology. Peter Kropotkin's groundbreaking *Mutual Aid* (published in 1902) was nearly equal parts anthropology, history, and ecology. Early anarchist thinker Elisée Reclus' older brother was an anthropologist.⁶¹ Amongst contemporaries, we have Brian Morris, Harold Barclay, and, until his death, Pierre Clastres. Nearly all of them were heavily influenced as well by Marx and Engels, both reliant upon anthropology. While I have no stomach for the degrees of communist and socialist civilizations they advocate or advocated, hindsight is far clearer.

The Marxists largely responsible for overturning anthropology, in particular, and the social sciences, in general, in the 1960s, owed more to the ultra-left defense of what they considered "primitive communism" amongst nomadic hunter-gatherers. Arguably, a number of them had more in common with anarcho-primitivists than Marx or even Kropotkin. That included some heavy hitters amongst anthropology, namely Richard B Lee, Marvin Harris, Andrew Vayda, Marshall Sahlins, Stanley Diamond, Roy Rappaport, and Eric Wolf.⁶²

Under any reading, all of those anthropologists upended the narratives of civilization by looking at egalitarian societies without blinders. In varying degrees, they all questioned civilization itself. Anthropology, in the words of George Marcus and Michael Fischer, could be "a form of cultural critique for ourselves."⁶³ Our narratives needed to be challenged. And if our history was perceived as a one-way street, complete with global and nearly universal stages of development, the continued existence and struggle for indigenous ways of living against forces of genocide and colonization could unravel them. Marcus and Fischer elaborate:

*One gains a thorough understanding of human subjects who exist buried as abstractions in the language of systems analysis. Without ethnography, one can only imagine what is happening to real social actors caught up in the complex macroprocesses.*⁶⁴

For Eric Wolf, ethnography, the practice of listening and understanding, was itself a confrontation of the narratives we carry with us:

*The anthropologist's hut provides no neutral ground, constitutes no privileged sanctuary. He and his tribal interpreter meet in a real world, tense with exploitation and the exercise of power. They cannot hide from each other; there is no hiding place. Determining one another, each asserts for the other his humanity and human possibilities. The field experience is, then, a political experience; it demands that the anthropologist expose the forces that imprison him and that he seek to expose the forces that imprison the native.*⁶⁵

Anthropology could be a tool to undermine and expose repression and oppression.

And it is a tool that a number of anthropologists wielded as a weapon. Harris decried industrialism as a bubble.⁶⁶ Rappaport pointed to our present reality where “the ‘interests’ of machines that even powerful men serve are ultimately dominant” and loudly proclaimed that civilization itself is “maladaptive.”⁶⁷ Diamond and Colin Turnbull were attacked for their “primitivism.”⁶⁸

Though these positions became predominant among anthropologists—who, at the same time, were heavily incorporating anti-patriarchal and pro-ecological underpinnings—this is definitely not where the field began.

Two of the founding fathers of ethnography, the practice of embedding within a culture or society to holistically understand them, Bronislaw Malinowski and E.E. Evans-Pritchard, typify the murkiness of the waters these later anthropologists would be rejecting.

Evans-Pritchard was a British anthropologist who cut his teeth working with the Azande, an agrarian society of North Central Africa in what is now the Congo and Sudan. His work caught the eye of the British military, then currently involved in a failing effort to conquer and settle the Nuer, pastoralists along the Nile Valley in what is now Sudan and Ethiopia. Evans-Pritchard was reluctant, having connected on a deeper level and interest with the Azande, but would eventually turn his attention to the Nuer.

Evans-Pritchard played the part of the professional. In doing so, he characterized what anthropologist Wendy James would brand the “reluctant imperialist.” And she was dead on. Evans-Pritchard tried to follow the credo set forward by Raymond Firth, that the “greatest need of the social sciences today is for more refined methodology, as objective and dispassionate as possible.”⁶⁹ True to Firth, Evans-Pritchard took funding from the military and the colonial government and wrote for military journals.

But, as Wolf would indicate, objectivity is easier on paper than on the ground.

Given the context under which Evans-Pritchard entered the world of the Nuer, it is not surprising that it took him far longer to develop any kind of personal rapport with them. By the time he had, his objectivity was wavering. He questioned the morality of colonial rule privately, but sought to humanize his subjects and hoping to appeal to the humanity of colonial administrators.⁷⁰

At best, this was hopeless naivety.

In reality, it was complicity in ethnocide: the subjugation of an insurgent indigenous community to life under colonial rule. He had his sentiments and defaulted on optimism on the battlefield of conquest where the narratives of civilization itself were being tried.

For the Nuer, Evans-Pritchard’s internal debate meant little to nothing. The attempts to humanize them in the eyes of colonial administrators failed. They were neither embedded nor engaged with the Nuer, nor did they intend to be. They were administrators handling insurgents, enter settlements, enter missionaries, enter the entire weight of the civilized world crushing down on a pastoral society in the forms of both militaries and paramilitaries, civil wars, sporadic drippings of cash, and, of course, the influx of guns.

There was no smooth transition, just another iteration of the colonial experience. It was a bloody affair, leaving corpses and culture in its wake.⁷¹

This is a strong argument for Stanley Diamond’s measured take on the history of anthropology versus its reality and potential:

*Of course anthropologists are spiritual double agents. That is, they are marginal to the commercial-industrial society that created them, but they eagerly explore the areas opened up to them by colonialism. Anthropology is an academic discipline, but it also implies revolt, a search for human possibilities.*⁷²

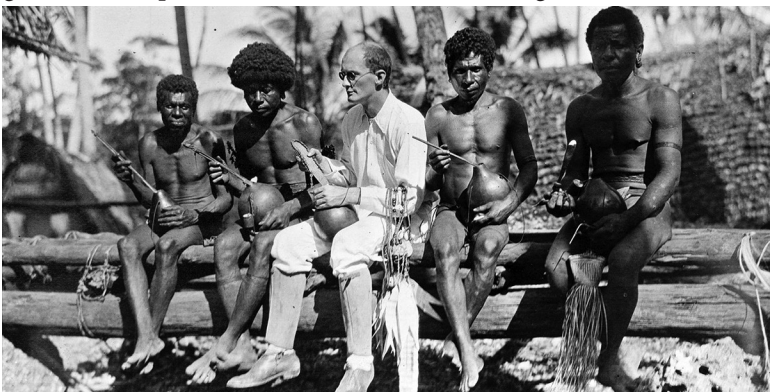
Malinowski's entrance to ethnography was vastly different. He got the opportunity to live among horticulturalists in Papua New Guinea, but then had his funds and chances taken away at the outset of World War I. He sat out the duration of the war living amongst the Trobrianders of Melanesia.

Malinowski wasn't reliant upon, or answering to, colonial administrators like Evans-Pritchard was. He was becoming enmeshed, having his objectivity thrown out in the process. Unlike Evans-Pritchard, who quietly bespoke the morality of colonization, Malinowski increasingly became critical of the colonial encounter, never quite the revolutionary on the matter, but outspoken.

He crossed the lines of objectivity and argued that documenting and recording wasn't sufficient, even if it's the bulk of an ethnographer's written work.⁷³ The role of the anthropologist wasn't just to quantify a society, but to understand and advocate on their behalf:

*The Native still needs help. The anthropologist who is unable to perceive this, unable to register the tragic errors committed at times with the best intentions, at times under the stress of dire necessity, remains an antiquarian covered with academic dust and in a fool's paradise*⁷⁴

Did Malinowski go far enough? No. But it makes sense of the zeal of Lizot and Clastres to defend, beyond reason, something like the warfare of the Yanomamö in the face of Chagnon's celebration of their genocide: the proverbial dirt on their would-be graves.



Malinowski among the Trobrianders.

What becomes clearer through this is that the baggage we carry as civilized people gets no free pass. There is no place, definitely no ac-

ademic discipline, where some kind of clarity is implicit or can be attained without question.

What is clear is the need to dig, to exhume the corpses civilization has attempted to bury, to unearth the parts of ourselves enchained to the domestication process. That process will always take work. And skepticism. It can be easy to look at the history of anthropology, and even many of its contemporary practices, and write it off completely.⁷⁵ But the problem is that we can do so only by objectifying anthropology as an entity, as an object that can potentially be rejected.

I will split no hairs in saying that the “study of humans” has no place in the world of the nomadic hunter-gatherers: within the ancestral genome that each of us is born to embody. But while our minds and bodies weren’t prepared for the world of civilization, this is where we exist.

Our elders are gone. Our world is being killed. The tools that we have, the very tools used to decimate indigenous and wild populations across space and time, may be imperfect, but they are what we have.

And we shouldn’t be afraid to use them against themselves.

Fredy Perlman’s *Against His-Story, Against Leviathan* is a blazing indictment of civilization and its use of history as the tales of conquerors.⁷⁶ It is also history and anthropology told in a way that speaks to the oral traditions of non-literate societies: places where stories still have meaning instead of just social power.

For Paul Shepard, history “is the great de-nativizing process.”⁷⁷ The process of historization removes us from where we are. It separates us, as individuals, from that flow between past and future into an isolated present. A place where we can act without responsibility and reproach: without obligation.

Yet this doesn’t keep him from arguing that “the prehistoric unconscious forms a better basis for the creation of a new history.”⁷⁸ This is about methods, frameworks, and narratives: not constructing ideologies built around every single piece of information that we are presented with or having to interpret everything through a single lens. So long as we are stuck in the world of civilization, we have no safe space, no area to reflect a moralistic platform to stand upon without contradiction.

If we want to find a way out, then it is one thing to use the tools we have and another to simply become them.

Such is the case with post-modern revisionists within history and anthropology. If our intent was simply to construct a perfect theory of

existence, they might have use. Seeing that I want to exist on a living planet where wild populations may soon thrive again, perfect theory is just a compilation of pretty words I couldn't care less about.

I strongly sympathize with the historian Michel-Rolph Trouillot's condemnation of post-modernism that "allows us to claim no roots." Speaking of its proponents, "I wonder why they have convictions, if indeed they have any."⁷⁹ And I sympathize equally with Stanley Diamond who stated, "Relativism is the bad faith of the conqueror, who has become secure enough to become a tourist."⁸⁰

I identify with Marvin Harris' cultural materialism: equal parts historical materialism and cultural ecology. The aim of which is "to account for the origin, maintenance, and change of the global inventory of socio-cultural differences and similarities."⁸¹ Cultural materialism is about identifying patterns, eliminating and identifying variables:

*At the heart of the cultural materialist theoretical corpus is a set of theories dealing with the origin of the principal varieties of pre-state societies, the origin of sexism, classes, castes, and the state, and the origin of the principal varieties of state level systems. By 'origin' I do not mean the unique concatenation of historical events leading to the first appearance of a particular thought or practice in a particular geographical spot, but to the nomothetic process giving rise to a type of institution under a set of recurrent conditions.*⁸²

Many flinch at the concept of human nature. History has shown times when it became weaponized, but when looking at the patterns of civilization, the kinds of myths told by domesticators from farmers to marketers and priests to bishops and kings to presidents all take the same form. They strike at the same needs that each of us, as a social animal, born a nomadic hunter-gatherer, would find within the wild communities of forager life.

Such definitive narratives can and do play into the hands of those with power. As I seek to undermine and destroy the systems that enable social power to arise, I can't say I'm too concerned about the potential trappings its critics might fear. Like Shepard and Perlman, I feel confident in owning it.

As Perlman put it, to speak of human nature:

grates on the nerves of those who, in R. Vaneigem's words, carry cadavers in their mouths. It makes the armor visible. Say 'the state

of nature' and you'll see the cadavers peer out. Insist that 'freedom' and 'the state of nature' are synonyms, and the cadavers will try to bite you. The tame, the domesticated, try to monopolize the word freedom; they'd like to apply it to their own condition. They apply the word 'wild' to the free. But it is another public secret that the tame, the domesticated, occasionally become wild but are never free so long as they remain in their pens.⁸³

We can understand what we have lost by eliminating variables. Removed from the naivety of the revolutionary that thinks we can recreate the world, understanding the patterns a historical world has created reminds us that the sacredness of individuality—and the perceived isolation that it grants—have offered us nothing concrete. That is, outside of concrete itself.

To undermine the narratives of civilization, we have to be willing to turn on ourselves. In digging up our roots among the fragments and strings that civilization has made of our world, there is a baseline there: a world that exists, that struggles, and is full of wild beings and communities that have and will outlast civilization.

The historic world seeks to bury them and place us within its dust.

It buried Ken. It buried Bushmen, Herero, and Nama bodies. It buried the Yanomamö and then danced upon the grave. We buried them.

But despite everything, the Ogoni, Bushmen, Herero, Nama, and Yanomamö still exist.

And so do we.

My point here and elsewhere is to show the links through time and place, to find the strings that go far and wide, deep and infinitely projected in space, and to pull them together. We don't exist in isolation even if our entire experience of the world as post-industrial consumers is set up exactly to give us that impression.

That means we take.

We take the tools available to us and we dig. We use them against the system. We expose the lies in its narratives and the weaknesses in its armor. The continued prevalence of civilization requires obedience. Those who have faced its guns, diseases, and decimation on the periphery have always stood against it. They still do. These strings are our link not only to understanding and finding them, but in pulling back the reigns of an overgrown and hemorrhaging leviathan.

This leviathan takes the form of Shell's paramilitary. It takes the form of DeBeers. It takes the form of slave traders, rubber barons, palm plantation owners, oil prospectors, and missionaries.

And it takes the form of Napoleon Chagnon.

Marshall Sahlins, the anthropologist behind the narrative barn-razing *Stone Age Economics*, speaks of the ferocity of the legends Chagnon left in the Amazon: "Representations of him grew more monstrous in proportion to the scale of the struggles he provoked, and even his trade goods were poisoned with the memories of death." The goods he left behind are viewed as black magic, "the products of a factory of xawara wakeshi, the deadly smoke of disease."⁸⁴

The charges against Chagnon, once exposed, were presented to the American Anthropological Association. Upon their investigations, they claimed that Chagnon had not violated their charters and protocols overtly enough to merit exclusion. In protest, Sahlins resigned from their board.

The problem isn't anthropology: it is civilization. These tools can be used on all sides.

The dust of old bones, the blood of new wounds: it all lies before us.

Those strings, these fragments of time and place, all lead to one place.



Ken Saro Wiwa.

The Dust of Old Bones in a Fool's Paradise

To change social life for the better, one must begin with the knowledge of why it usually changes for the worst.

- Marvin Harris, *Cannibals and Kings*⁸⁵

The stories of civilization, the piecing together of fragments of a fractured world, are not my story, yet my role within it is inescapable.

The story of Ken's life is seemingly local. We never met, yet our lives crossed in profound and endemic ways. The Bushmen are among the oldest living societies on earth, having occupied one relative region for hundreds of thousands of years, most likely far more, living largely as they had until being relatively recently thrust into historic time. The Yanomamö came together from exiled hunter-gatherer and horticultural societies having escaped the intrusions of civilizations, both native and Western.

We all end up within the same system. Facing the same dying civilization. Watching it attempt to consume every last piece of our world to sustain itself for a fraction of historical time. A mere speck of biological time.

I am a fragment of a globalized world. I am the progeny of victims and victors, oppressors and oppressed. My parents were white, but their parents were not. The only universal amongst all my relatives is that they all came from and subsequently suppressed hunter-gatherers first, then each other later.

My blood is both conflict and resolution.

To unearth the hunter-gatherer lineage that links my nomadic forager-scavenger body and mind, there's a lot of baggage. Its exhumation wouldn't be necessary if I wasn't the awkward historical amalgam resulting in my own First World, American, white male standing.

A hundred years ago, it would have been vastly different. Seventy years ago, I could have faced extermination at the hands of Nazis. Two hundred years ago, some of my ancestors may have owned slaves. Two thousand years ago, some of my ancestors were slaves.

Yet every single one of us was born, psychologically and physiologically, a hunter-gatherer.

The circles link throughout time and place.

My grandfather managed to escape the Holocaust. A pogrom built upon the modernizing expansions of Germans into the Kalahari.

On the frontlines of the Herero concentration camps was Dr. Eugen Fischer, a German eugenicist who picked up the bodies of executed Herero men, women, and children to experiment upon. To build and test theories that ultimately culminated in his magnum opus, *Principles of Human Heredity and Race Hygiene* in 1921. A book discovered a mere two years later by a man imprisoned for a failed coup

in Landsberg Prison in Germany. One Adolf Hitler.⁸⁶

The book fed into Hitler's Final Solution. It gave his Third Reich more traction. Turning one genocide into the ideological basis for another. Turning the fear of lost identity into a weapon of conquerors.

Round and round we go.

Officially speaking, Shell pulled out of Ogoni land in 1993. With one caveat: "Ogoni land continues to serve as a transit route for pipelines transporting both [Shell] and third-party oil production from other areas." From the mouths of Ogoni people I had spoken with and stared at with wonder as they smiled at racist, white suburbanites, the pipelines *were* a major issue.

Shell could legally wash their hands of what was to come. They've gone even further now, continuing to claim that Ken was responsible for the murder of Ogoni elders, that his execution was the result of presumably fair trials. Meanwhile they are calling for reconciliation with the Ogoni: an asinine attempt to find someone willing to take a payout.

To bury it.

To put it deeper into the bloodied grounds of Ogoni land, where the oil should have never been extracted.

I've spoken of the power of narratives. Words mean a lot. Framing means a lot. Context, all of it.

So when you find the above information on the website of Shell Nigeria, it's infuriating. But when you realize that it's under the sustainability subsection, blood boils.⁸⁷

History is a lie we tell ourselves.

A lie that we are told.

Our narratives, our perceptions of our own world: this is how we remain complicit, how we keep working, buying, signing online, and just going with the flow. From the shattered version of the world that we embody, the allure of escaping into the suffocating void of the technosphere, a place where we can be as special and as unique as marketers tell us we are, can be apparent.

But it offers nothing. It is a blinder. It keeps us from picking up the pieces of our lives, our past, our present, and our future. From seeing the terrifying world we inhabit.

And, most importantly, it keeps us from pulling on the strings enough to see that it is fully within our power and reach to cut the cords that fuel the entirety of it.

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- 38 The Guardian, 'Botswana faces questions over licenses for fracking companies in Kalahari.' November 17, 2013. <https://www.theguardian.com/environment/2013/nov/18/botswana-accusations-fracking-kalahari>
- 39 Stanley Diamond, *In Search of the Primitive*. New Brunswick, NJ: Transaction, 1987 [1974]. Pg 93.
- 40 David Thomas and Paul Shaw, *The Kalahari Environment*. Cambridge: Cambridge UP, 1991. Pg 16.
- 41 Susan Martin, *Palm Oil and Protest*. Cambridge: Cambridge UP, 1988. Pg 123. And 'Cocoa Production in Nigeria,' Wikipedia. https://en.wikipedia.org/wiki/Cocoa_production_in_Nigeria
- 42 Napoleon Chagnon, *Yanomamö: The Fierce People*. New York: Holt, Reinhart, and Winston, 1968.
- 43 John Hemming, *Red Gold: The Conquest of the Brazilian Indians*, Cambridge, MA: Harvard University Press, 1978.
- 44 Michael Edward Stanfield, *Red Rubber, Bleeding Trees*. Albuquerque, N.M.: University of New Mexico Press, 1998. Meanwhile, a similar trajectory was taking place in Africa's Congo. There are a lot of great books on the matter, but among the best is Adam Hochschild, *King Leopold's Ghost*. New York: Houghton Mifflin, 1999.
- 45 Wade Davis, *One River*. New York: Simon & Schuster, 1997. Opt cit.
- 46 Gerard Colby and Charlotte Dennett, *Thy Will be Done*. New York: Harper Collins, 1996.
- 47 R Brian Ferguson, 'Blood of the Leviathan.' *American Ethnologist*, Vol 17, No 2, May 1990. Pg 244.
- 48 Francis Jennings, *The Ambiguous Iroquois Confederacy*. New York: WW Norton, 1984.
- 49 Paul Shankman, 'Culture Contact, Cultural Ecology, and Dani Warfare.' *Man*,

New Series, Vol 26, No 2, June 1991.

50 Andrew Vayda, *Maori Warfare*. Wellington, New Zealand: Polynesian Society, 1960. Andrew Vayda, *War in Ecological Perspective*. New York: Plenum Press, 1976.

51 Daniel Steel, 'Trade Goods and Jivaro Warfare.' *Ethnohistory*, Vol 46 No 4, Autumn 1999.

52 Andrew Vayda, 'Expansion and Warfare among Swidden Agriculturalists.' *American Anthropologist*, New Series, Vol. 63, No. 2, April, 1961.

53 For more on this, see my essay 'Society Without Strangers.' *Black and Green Review* no 4, 2016.

54 R Brian Ferguson, 'A Savage Encounter' in Ferguson and Whitehead (eds), *War in the Tribal Zone*. Santa Fe, NM: SARS Press, 1992 and R Brian Ferguson, *Yanomami Warfare*. Santa Fe, NM: SARS Press, 1995.

55 Patrick Tierney, *Darkness in El Dorado*. New York: WW Norton, 2000.

56 Jacques Lizot, 'Population, Resources and Warfare Among the Yanomami.' *Man*, New Series, Vol 12, No 3/4. December 1977.

57 Pierre Clastres, *Archeology of Violence*. New York: Semiotext(e), 1994. Pg 164.

58 Pierre Clastres, *Society Against the State*. New York: Zone, 1989.

59 See Ferguson, 1992 & 1995.

60 Paul Shepard, *Coming Home to the Pleistocene*. Washington DC: Island Press, 1998. Pg 12.

61 Brian Morris, *Anthropology, Ecology, and Anarchism*. Oakland, CA: PM Press, 2014. Pg 58.

62 I have distinguished elsewhere and will elaborate further in time on the matter of "primitive communism," a catch-all term where communism and communalism could almost be considered interchangeable. Communism means communal ownership of the means of production, but considering that immediate-return hunter-gatherers had methods of procurement without production (a lack of surplus); there was nothing to own. Hence my use of the term "primal anarchy" which applies to many societies widely considered "primitive communism."

It is also telling to me that Stanley Diamond's almost confusing allegiance to communism over anarchism had to do with his conflation of anarchism with the more libertarian-leaning sects of individualist anarchism, as typified by Max Stirner. If that were the be all, end all of anarchism, it would definitely make more sense.

63 George E Marcus and Michael MJ Fischer, *Anthropology as Cultural Critique: An Experimental Moment in the Human Sciences* (Second Edition). Chicago: University of Chicago Press, 1999. Pg 1.

64 Ibid, pg 82.

65 Eric Wolf, Introduction to Diamond 1987. Pg xii.

66 Marvin Harris, *Cannibals and Kings*. New York: Vintage, 1978.

67 Roy Rappaport, 'Maladaptation in Social Systems' in J Friedman and MJ Rowlands, *The Evolution of Social Systems*. Pittsburgh: University of Pittsburgh, 1978. Pgs 63 and 66.

68 For Turnbull, this was the primary "negative" review of his book, *The Human Cycle* (New York: Simon & Schuster, 1983). For Diamond, it was an even more prevalent theme as his 1987 book *In Search of the Primitive* makes clear. It was

such a central point that the first volume of an anthology in his honor is titled, *Civilization in Crisis: Anthropological Perspectives*, and the second is subtitled, *A Critique of Civilization*. Both edited by Christine Ward Gailey (Gainesville: University Press of Florida, 1992).

69 Cited in Wendy James, 'The Anthropologist as Reluctant Imperialist' in Talal Asad (ed), *Anthropology and the Colonial Encounter*. Amherst, NY: Humanity Books, 1973. The whole collection is really excellent.

70 Douglas H. Johnson, 'Evans-Pritchard, the Nuer, and the Sudan Political Service,' *African Affairs*, Vol. 81, No. 323. April 1982.

71 Sharon Hutchinson, *Nuer Dilemmas*. Berkeley: University of California Press, 1996.

72 Diamond, 1987. Pg 89.

73 Oddly enough, the meticulous nature of recording information and stories is what makes ethnography as useful of a record as many explorers or historians accounts: they come down to data. Even when R Brian Ferguson was deflating the lies of Chagnon, he was able to use the data Chagnon had presented against him.

74 Cited in James, 1973. Pg 66.

75 It is worth noting that I stopped pursuing my own graduate studies in anthropology precisely because I had no interest in taking part in the colonial remnants that field work could find itself in: having to work with missionaries, being granted permissions from governments, dispensing medications and bribes. I think there are ways around it, but at the time found no clear path ahead on it.

76 Fredy Perlman, *Against His-Story, Against Leviathan*. Detroit: Black & Red, 1983.

77 Shepard, 1998. Pg 12.

78 Ibid. Pg 17.

79 Trouillot, 1995. Pg xviii.

80 Diamond, 1987. Pg 110

81 Marvin Harris, *Cultural Materialism*. New York: Vintage, 1980. Pg 27.

82 Ibid. Pg 78.

83 Perlman, 1983. Pg 7.

84 Marshall Sahlins, *Jungle Fever*: review of *Darkness in El Dorado*. *The Washington Post*, BOOK WORLD; Pg. X01, December 10, 2000

85 Harris, 1978. Pg xiv.

86 Suzman, 2017. Pg 200.

87 Shell Nigeria, 'The Ogoni Issue' accessed online at <http://www.shell.com.ng/sustainability/environment/ogon-issue.html>

This is the title piece of the upcoming collection of essays from Kevin Tucker, *Gathered Remains*. The essays in this collection focus on the consequences of domestication, the loss of community, and the ecology of resistance. The book will be out in winter/spring 2018 from Black and Green Press.

For more information, see blackandgreenpress.org and for more information for other books in the works from Kevin, see kevinutucker.org.

Night



John Zerzan

Total solar eclipse. Photo by Yank.

Night is so often a stand-in for what is concealed, what is fearsome or evil. Night is even the realm of demons, incubi, black magic, nightmares, unseen dangers of all kinds--the negative side of reality. In this vein Joyce Carol Oates has the coming of night "the drawing of darkness out of the basic dark of the world."¹

On a personal and contemporary level, that "3 a.m. feeling" is well-known, in a world where so many fear being alone. In an Age of Distraction, night—unadorned—offers fewer diversions. For better or worse, night is more conducive to being in the here and now. Henry Beston noted in the 1920s that our "civilization has fallen out of touch with many aspects of nature, and none more completely than with night."²

"But how do you understand the night,"³ asks Heidegger, adding, "In the dark I see nothing, and nonetheless I see."⁴ Gaston Bachelard felt that nights are singular, unrelated, without history or future.⁵ Much remains to be explored, however. In fact in the same work, *The Poetics of Reverie*, Bachelard wants to know, "Where is the philosopher who will give us the metaphysics of the night, the metaphysics of the human night?"⁶

There is sublimity—also, at times, terror. "Take Back the Night" is an important reminder of the latter. Night can be an unsettling staring into the void, or an invitation to immersion and participation. The

poet Novalis pondered these aspects, wondering, "Are you teasing us, dark Night? What're you holding under your cloak, that grabs so unseen at my soul?"⁷ His "Hymns to the Night" proclaim night's gifts and prescribe openness to the coming of a deep, non-rational experience. All real knowledge arrives as a gift.

The darkness at night is earth's shadow, earth blocking the sun. Composer Franz Schubert referred to it quite differently as he set to music Johann Gabriel Seidl's poem "Bright Night." He expressed night in this piece as bathed in "rich light." Stevie Smith's "The Light of Life" enjoins us to "Put out that Light,/Put out that bright Light,/ Let Darkness fall."⁸ In the night's vast stillness is a darkness that can be felt. In the nocturnal deep (battling light pollution and noise pollution, of course) is an undeniable presence.

The 18th century poet Edward Young proved himself night's worthy laureate. His *Night Thoughts* found the dimension freeing and profound, liberated from the bonds of daytime restraints. Lorus and Margery Milne's *The World of Night*, two centuries later, sees the dark world as a place new and undiscovered. Speaking of exploration and discovery, David G. Campbell recorded an Arara woman in the '90s in the Amazon: "The comet stretched across half the sky, night after night I came to the edge of the river and watched. Now that was discovery!"⁹

When all of day's roads seem to lead nowhere, the night may offer aid. Let the flower of night unfold for us. Byron:

*And this is the Night – Most glorious Night!
Thou wert not sent for slumber! let me be
A sharer in thy fierce and far delight, –
A portion of the tempest and of thee!*¹⁰

There is potential in David Michael Levin's counsel "that we be open to the radical and essentially subversive teachings of the night."¹¹ Night's hush and invitation to solitude attract those who seek a haven from stress and from conformity.

Henry Vaughan's "The Night" opens with "Dear Night! this world's defeat,/ The stop to busy fools, care's check and curb."¹² It has been a time of rest and of reflection.

And many people, in Europe for example, became more powerful at night, in de facto control of the nocturnal landscape. "Midnight feastings are great wasters,/ Servants' riots undo masters," according to an Elizabethan saying.¹³ Despite the steadily rising powers of the

early modern state, “nighttime defied the imposition of government authority.”¹⁴ Gatherings of all sorts took place after work and sunset, the camaraderie often stoked by ale, beer, or wine. Spinning or knitting bees could be the occasions for female solidarity, away from men.

From the late Middle Ages, an assault on the autonomy of the submerged classes took the form of a profound demonization of night. It was assailed as the realm of witches and other agents of Satan. With the 18th century the effort to reclaim the night took a new form: public illumination. Lighting had great promise as a weapon of social control—and for this reason “where urban disorders occasionally flared, among the first casualties were street lamps.”¹⁵ People were also hung from lampposts--the French rallying cry was “à la lanterne!”



Night defied. Image from NASA.

Gas lighting was developed in the context of the Industrial Revolution; it enabled round-the-clock factory operations. Night became subject to industrialization and the subsequent consumerism. There is a very sizeable literature on the increasing toll, socially and personally, as nighttime is ever more invaded and colonized.¹⁶ Less sleep and a rise in sleep disorders are among widespread and worsening problems. Steadily diminished night also has profound impact on ecological systems and patterns. No less than our oldest path to the human psyche is being obliterated.

Various religious traditions have valorized the night. The Koran is based on Mohammed's nightly prayers, his “nightly journeys.” 16th century Spanish mystic St. John of the Cross, in his *Dark Night of the Soul* and elsewhere, describes night as “a friend, even the supreme friend,” in George Tavord's words.¹⁷ *Dark Night of the Soul* contains this typical exclamation: “O guiding night!/ O night more lovely than dawn!”¹⁸ Eastern spirituality in general, and Taoism in particular, are

even more consistently and more deeply at home in this dimension. "Darkness within darkness,/ The gateway to all understanding," proclaims the Tao Te Ching.¹⁹

In terms of sensory understanding, night reminds us of an acuity of the senses that we once had, and may have again. Hearing, touch, and smell necessarily re-assert themselves as seeing recedes in importance. "The day has eyes, but night has ears," according to a Scottish proverb. Hermia in *A Midsummer Night's Dream* contemplates "Dark night, that from the eye his function takes,/ The ear more quick of apprehension makes./ Whereupon it doth impair the seeing sense,/ It pays the hearing double recompense." But it is also true that even without a moon, a starlit sky enables humans and many other animals to see quite well. Once the pupils have widened and the retina has adjusted, a person can see almost as well as an owl or a lynx.²⁰ Peripheral vision may actually sharpen.²¹

Dusk announces the time for philosophy when, as Hegel saw it, the Owl of Minerva, the goddess of wisdom, takes flight. Sunset is not tame; night does not fall, but rises. The dominant daytime world begins to appear less believable. Novalis observed, "How poor and childish the Light seems now—how happy and blessed the day's departure."²² D.H. Lawrence's "Twilight" shares a similar sentiment: "All that the worldly day has meant/ Wastes like a lie."²³ And so to cast off into the stillness of the night; the darkness thickens, opens to essentials.

In the city searchlights poke up through the night, as if searching for something. In the wordless star-lashed dark, the night crying its truth, as ever. One sun by day, ten thousand shine by night, Steady Pole Star, glittering Pleiades, Orion's studded belt... Overflowing heavens of stars in a nightscape old as water, older. The dotted waves of night, always breaking. "Tonight the stars are like a crowd of faces/ Moving round the sky and singing/ and laughing," wrote Wallace Stevens.²⁴ Byron found "the language of another world" in "night's starry shade/ Of dim and solitary loveliness."²⁵ John Hollander provides some lines of promise: "The world is everything that happens to/ Be true. The stars at night seem to suggest/ The shapes of what might be."²⁶

"Come up, thou red thing./ Come up, and be called a moon" was D. H. Lawrence's address in his "Southern Cross."²⁷ Emblems of wholeness, face of the moonful midnight sky. Lunar mythology seems universally to have preceded solar mythology.

"Hear the night bellow,/ our great black bull. Hear the dawn/

distantly lowing,” Hayden Carruth perceives.²⁸ Night in retreat, not wanting to “face the music”...dawn. Hart Crane expresses reluctance to surrender: “Serenely now, before day claims our eyes/ Your cool arms murmurously about me lay.”²⁹ Night consoles, but must give way to day. Novalis again: “Now you, bright light, are waking those tired ones to work.”³⁰

In the night’s less structured qualities insight may lurk, a flash of lightning, in more ways than one. As Rilke put it, “it is possible a great energy/ is moving near me./ I have faith in nights.”³¹ The thing can go either way. Iago (*Othello*, Act 5, Scene 1) puts it bluntly: “This is the night; that either makes me or does away with me quite.” Night is really the last place to hide.

Emmanuel Levinas saw in night “the very experience of the *there is*...a presence, an absolutely unavoidable presence.”³² Once we gathered in the night around the fire, unmediated, surrounded by the universe, listening and learning. Green and present is the night.

“She walks in beauty, like the night...”

–Byron



Endnotes

1 Joyce Carol Oates, *Anonymous Sins & Other Poems* (Baton Rouge: Louisiana State University Press, 1969), p. 37.

2 Henry Beston, *The Outermost House* (Garden City, NY: Doubleday, 1928), p. 165.

3 Quoted in David Michael Levin, *The Opening of Vision: Nihilism and the Post-modern Situation* (New York: Routledge, 1988), p. 374.

4 *Ibid.*, p. 373.

5 Gaston Bachelard, *The Poetics of Reverie* (Boston: Beacon Press, 1971), p. 145.

6 *Ibid.*, p. 147.

7 Novalis: *Hymns to the Night*, translated by Dick Higgins (New Paltz, NY:

- McPherson & Company, 1984), p. 11.
- 8 Stevie Smith: *Collected Poems* (New York: New Directions, 1983), p. 372.
- 9 David G. Campbell, "The Explorer's Journey," in William H. Shore, ed., *The Nature of Nature* (New York: Harcourt Brace & Company, 1994), p. 29.
- 10 "Child Harold's Pilgrimage," *Byron's Poetry*, Frank D. McConnell, ed. (New York: W.W. Norton, 1978), p. 71.
- 11 Levin, *op.cit.*, p. 349.
- 12 Henry Vaughn, "The Night," in *A Treasury of Great Poems*, Louis Untermeyer, ed. (New York: Simon & Schuster, 1942), p. 491.
- 13 Quoted in A. Roger Ekirch, *At Day's Close: Night in Times Past* (New York: W.W. Norton, 2005), p. 255.
- 14 *Ibid.*, p. 88.
- 15 *Ibid.*, p. 336.
- 16 For example, Martha Gies, *Up All Night* (Corvallis, OR: Oregon State University Press, 2004); Murray Melbin, *Night as Frontier: Colonizing the World After Dark* (New York: The Free Press, 1987); Martin Moore-Ede, *The Twenty-Four Hour Society* (Reading, MA: Addison Wesley, 1993).
- 17 George H. Tavard, *Poetry and Contemplation in St. John of the Cross* (Athens, OH: Ohio University Press, 1988), p. 58.
- 18 *Ibid.*, p. 57.
- 19 *Tao Te Ching*, new English version by Stephen Mitchell (New York: Harper & Row, 1988), p. 1.
- 20 Melbin, *op.cit.*, p. 8.
- 21 Ekich, *op.cit.*, p. 124.
- 22 Novalis, *op.cit.*, p. 13
- 23 "Twilight," in *The Complete Poems of D.H. Lawrence*, Vivian de Sola Pinto and Warren Roberts, eds. (New York: The Viking Press, 1964), p. 41.
- 24 "Dezembrum," in *The Collected Poems of Wallace Stevens* (New York: Alfred A. Knopf, 1971), p. 218.
- 25 "Manfred," in McConnell, ed., *op.cit.*, p. 155.
- 26 John Hollander, "The Great Bear," in *The Norton Anthology of Modern Poetry*, Richard Ellmann and Robert O'Clair, eds. (New York: W.W. Norton, 1973), p. 1241.
- 27 D.H. Lawrence, "Southern Night," in de Sola Pinto and Roberts, eds., *op.cit.* p. 302.
- 28 "Dawn," in *The Selected Poetry of Hayden Carruth* (New York: Macmillan, 1985), p. 45.
- 29 "The Harbor Dawn," in *The Complete Poems of Hart Crane*, Marc Simon, ed. (New York: Liveright, 2000), p. 53.
- 30 Novalis, *op.cit.*, p. 21.
- 31 Untitled, *Selected Poems of Rainer Maria Rilke*, translated by Robert Bly (New York: Harper & Row, 1981), p. 5.
- 32 Emmanuel Levinas, "From existence to ethics," in *The Levinas Reader*, Sean Hand, ed. (New York: Blackwell, 1989), p. 30.



All photos by Four Legged Human.

Author's note: While fictionalized here, this story is based on actual events which occurred during 2017.

Tiqin sat calmly on the trunk of a fallen elder cottonwood tree, just hidden out of sight of the lake shore next to the small creek which drained into the lake from the mountains above. He listened to the sounds of the creek water flowing and the lake water lapping against the shore. 'There must be something to it' thought the teen boy, a reason why the only time he felt better these days was when he went to sit alone in this spot, hidden in the forest, next to the creek, above the lake, below the towering mountains.

* * *

Tiqin's ancestors had traveled through those mountains for millennia hunting caribou, ptarmigan, and bear, and later, after the arising of great climactic changes, hunting the new four-legged animal, the great deer which his Athabascan Dnayi peoples called *K'uhda'i* and which the Algonkian speaking peoples far to the east called Moose. The Dnayi had also always lived on fish from the lakes; pike, whitefish, burbot, and trout, but when the warming advanced new fish began arriving, thousands upon thousands of them each summer. They came in masse up the river and through the lake and then swam up

tributaries into the mountains. Slowly these fish transformed into fragile “red fish” which eventually melted away, becoming part of the river, but not before the bears and the people had taken many, enough to feed their clans and to cache away for the long, cold, silent, sparse winter. During the ancestral times the Dnayi were band-level mobile hunters, seeking caribou across the tundra, climbing the mountains in the quest for sheep, occasionally coming across a great bear. Later, when the salmon came, the Dnayi built villages and most of the bands came together as one for a large portion of the year.

Life went on like this for generations, the people worked hard, sometimes they struggled to make it, but they lived good, for the most part always stable, healthy, and happy. Sometimes families would fight with one and other, but not very often. The only real trouble was the fear of running into Eskimo raiders from the sea coast who had been consistently encroaching into the interior in search of game and items obtained only from the forests. However, since not all of the Dnayi had settled along the salmon rivers, it was only those whom had that bared the brunt of the raiding and fighting with the Eskimo groups: being that conflicts often centered around salmon fishing sites and the wealth and control dynamics which came with this new subsistence practice.

Meanwhile the small bands of Dnayi who elected not to focus on salmon and settle on the rivers had made the decision to stay in the mountains subsisting on caribou, sheep, bears, ptarmigan, marmots, ground squirrels, roots, and berries. They lived well and mostly in peace, even if they sometimes struggled more than the river people who maintained an elevated level of food security, they had not surrendered the freedom and flowing spirit maintained by their caribou hunting ancestors of many generations before.

* * *

It was during Tiqin’s great grandfather’s time that the most consequential and rapid changes began occurring in association with the arrival of many newcomers. Strange pale-faced people dressed in odd, faulty clothing and who possessed magical exploding fire-breathing spears, and leghold traps made from a shiny material that was harder than rock. The strangers wanted the furred pelts from the small animals and they were willing to trade these to the Dnayi in exchange for some of their astonishing hunting, trapping, and war tools and also for some of the sweet foods they ate, food that was like nothing the

Dnayi had ever eaten before. The evolved want of, and eventual 'need' for, these goods changed everything for the Dnayi. In the moment it was a practical and simple choice to choose what was easier, more time and energy efficient. In the long-run these choices came with consequences, consequences which shifted the entire orientation of Tiqin's people away from millennia of one specific way of seeing the world and of organizing socially – to a new way that was much more divided, segmented, economically 'rational', and exploitative.

Taking the life of an animal within wildness drifted away from being a sacred act of social ecology and survival. Killing increasingly became not only for food, but for trade. Market hunting to provide food for Euroamerican miners and trappers in exchange for guns, steel goods of all types, sugar, salt, liquor, and cloth. Salmon to export around the world in exchange for cash which would bring unprecedented 'progress' and 'wealth;' cash meant the Dnayi could now obtain televisions, motorboats, all-terrain-vehicles, cars, computers, smartphones, and even their own airplanes. This was a social and spiritual world far distant from the one of the caribou following times of Tiqin's long lost grandfathers. Not only was this way of living distant in terms of its material culture and social relations – the distancing was diminishing in the depths of everyone's hearts; elders, sons, daughters, and children alike – and deep inside everyone knew that. They felt it in their hearts and they were honest with themselves about the power that their evolved dependency on industrialized products and the infrastructure of civilization had over them. Elders and parents would often say that the trade-off for ancestral ways in exchange for the conveniences of modernity was a massive one and that entanglement in the global industrial world had destroyed so much of their once communally self-sufficient and socio-spiritually satisfying band-level ways. They would comment on these emotional and physical realities but normally just shrug – "we are too far gone down the path of being civilized to turn back now" – "we don't know how to live like that anymore" – "the old ways were too difficult" – "the young people today would never be able to do it. These kids have never learned the old ways of living from the land and of working together as a community. It is really hopeless. But we sometimes find release in sitting around reminiscing and complaining about all this nonetheless". For kids like Tiqin listening in to these elder conversations at fish camp usually left him in a state of confusion: on the one hand he was always being told that the old ways were better, that the white-man had come and disrupted the once great lives of the Dnayi,

that he should listen to his elders and learn all the skills of hunting and gathering – but on the other hand the school, the tv, the internet, the village adults, and the elders – seemed to also be telling him that the only future was one where somehow he obtained money to buy products, machines, and fuel.

Meanwhile it seemed that all these products his people wanted were becoming increasingly unaffordable. There was not much for a cash economy in Tiqin's village – most people scrapped together cash through entitlements and by selling odds and ends or doing occasional maintenance or construction work funded from the outside. The few families who had money were the longstanding commercial salmon fishing people, and ironically they seemed to be the ones who did the most consistent 'traditional activities' like hunting and fishing and blueberry gathering. Often they would distribute what they harvested to other families who could not afford to hunt anymore, since hunting and fishing was no longer done without money, without being transported by machines.

Not only were all of these 'necessities' increasingly unaffordable, many of the people seemed to live increasingly in a state of psychological despair. The immensity of this deep despair would reveal itself during those days after the bootlegger shipments arrived, alcoholism becoming rampant. When this happened Tiqin wanted nothing to do with the adults or the older kids. So he would walk downriver and stay in his grandfather's old fishing cabin and wait for the day when the village dried out and everybody started to sober up.

Usually he would go alone because most of the other kids seemed to just want to mimic the adults. The younger kids still appeared fascinated by the wild world which surrounded the village. They still played outside whenever they were not in the school or sleeping. But the older kids, once they had smartphones in their possession and had had a taste of booze, became distant and unfocused on the real situation: the situation which, through his sobriety and his daily meditations at the lake, Tiqin could perceive. Moreover, not only had the other kids got into booze, other substance abuse was common; if they couldn't get liquor they would slam cough medicine, or huff paint, empty gas cans, and other chemicals. Then some of the bootleggers also started selling meth and opiates. In some of the native villages there arose heroin abuse epidemics and teenage suicide amongst both Eskimos and Athabascans also reached epidemic proportions.

Some kids were smarter. They did well in school and even went to college. Many of these 'smart' kids would never return to live per-

manently in their ancestral villages. Instead they would get jobs in the city, returning each summer for salmon camps, bringing boxes full of industrial foods and other goods to distribute to their less well-to-do families. The college degree holding young-adults who did return quickly become leaders of tribal councils, regional councils, and village corporations. Their jobs were centered on bringing money in to the communities. Grants were constantly sought, efforts framed in the name of upholding 'traditional' indigeneity. These efforts usually brought small amounts of money in, enough to provide a few good jobs and community based programs – the money trickled down and kept the villages going but it nonetheless served to continually increase the distancing from the ancestral ways which were the original and enduring source of both personal and community resilience. Money mostly paid for imported industrial foods and for fossil fuel; heating fuel, fuel to run the electric generators, and fuel to transport people on machines for fishing, hunting, gathering and even just for going to visit a relative. At one point Tiqin's family owned an ATV but then it broke down, so Tiqin usually always had to walk, but it seemed like hardly anybody walked places, especially the adults. If there was no motor transport available people usually chose to sit and watch TV rather than walk. Most of the people did own machines for travelling around, but using them was dependent on having money to purchase fuel, which was not always available in sufficient quantities, for most.

But there were a select few families who always had fossil fuel, always had lots of store-bought food, and always had new machines. These were the families of those 'educated' ones that ended up with jobs working for, or leading, tribal corporations – whose focus was generally to extract natural resources found on native lands and sell them off in the global markets. These tribal 'leaders' were ultimately facilitated in this by their dealings, associations, and agreements with global mega-corporations. Essentially, in order to market the entire process in as politically correct a manner as possible, the leaders of the global corporations utilized mutually-beneficial relationships with corporate tribal leaders to gain access to resources from indigenous lands and waters. In this process both they and the corporate tribal leaders would grow wealth. The other, non-corporate, non-leaders in the communities would receive shares of the wealth gained from this resource exploitation process. Usually these 'shares' never amounted to much for the commoners, but the tribal leaders often lined their pockets and became increasingly domesticated and distant from ancestral ways as a result. Nevertheless, they always shamelessly used

their indigeneity, their 'nativeness,' as a public relations and marketing tactic to keep getting what they wanted, what they had made themselves dependent upon.

* * *

Tiqin watched the stories unfold; proposals for a new mine or pipeline. Protests from the common folks that such extraction projects would harm the land and the habitats of the animals they traditionally depended upon for their survival. Assurances were constant from the big corporations, governments, and coopted tribal leaders that 'development' can and will be done 'sustainably' and also that 'all' of the people will benefit, that their dividend checks would grow, that everything would be better, that they would have more money and would still be able to maintain their 'subsistence lifestyles,' their 'customary and traditional' ways.

The land of Tiqin's people never had an abundance of resources that the corporations desired to exploit so even though some of the village leaders had more than the common folk, nobody ever had much. But further downriver people made lots of money selling salmon on the world markets and Tiqin knew of other tribes who had lots of oil, gas, gold, silver, copper, and coal on their lands and whose leaders had become rich men and where even the common people received large annual dividend checks. Sometimes Tiqin wished he would have been born into a family from one of these villages, so he could have more, even just so he could afford to go hunting at all. Tiqin learned early on that he loved hunting more than anything else- it was the only time he felt dignified and free. But hunting required a rifle, ammunition, and fuel; things which Tiqin's family could hardly afford. Tiqin would sit and wonder how it was that only the native people with money could now participate in the old ways, hunting, fishing, and gathering, when he knew that his grandparents, great grandparents and beyond had always hunted and gathered and never had money. The whole situation befuddled him. In fact it felt hopeless day in and day out. Out of this despair, he was tempted many times to join the other kids in drinking or doing nothing else but sitting around, or spending the day playing with one of the fancy cell-phones everyone wanted so bad. But instead, finding the strength to grasp something distinctly felt deep within his mind and body, Tiqin walked – often down the lake to the little grove of cottonwoods where he would sit and think. Tiqin never gave up on his quest for answers, even though everything

felt increasingly hopeless.

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One day Tiqin's mother gave him some exciting news: he was to go along with his mother, sister, and grandmother on a trip to the city, where his grandmother would receive medical care at the BIA hospital. While there, the family would stay in a hotel and shop for things to bring home. A small airplane delivered them to the city airstrip. Arriving in this world of noise, roads, buildings, shops, lights, and manically hustling and bustling humans was shocking to the senses of the remote-living Dnayi family. The elder women had seen this all before, but for Tiqin it was overwhelming and he was torn between sensing the world open up with bountiful opportunity for social interaction, employment, consumption – the ability to have things – and the subtle sense that something was all wrong, that the entire thing was a trap, a scheme, a façade. He met other Dnayi people who had left the bush behind for the city and obtained jobs, bought houses, cars. He saw others in groups on street corners drinking and asking for change from passersby. At night he couldn't sleep because of the incessant noise of motors. They shopped, but the money they had brought with them was quickly gone. There seemed to be an abyss of products to buy; an atmosphere of unlimited wants, but always limited means. Tiqin's little sister wanted a computer tablet so much that she cried and cried when her mother told her the family could not afford it. In a shopping mall the little girl was exposed to the plethora of fancy electronics, things which before she could only have dreamed about. But there was no money to buy such things. At first Tiqin also felt this curious desire to be part of this consumer world, but, being the attentive, resolute, and introspective boy that he was, he quickly saw through it, he knew in his heart the entire project was hopeless, unfulfilling to the mind, spirit, and body. He distinctively felt that what he was seeing in the city represented the wrong path forward, the wrong way for him, for everyone else involved, and certainly for his Dnayi people. But what did he have as a future back in the village which he must return to the next day on the small little airplane? He wanted to go back there, simply for the peace, for his little spot in the cottonwoods next to the stream near the shore of the lake. And he was pretty happy that the one thing he was able to buy in the city was a box of ammunition for his father's old .300 win-mag rifle. With this at the very least he would be able to go hunting this fall, even if he had to

walk from the village into the wild country alone.

The final night in the hotel the TV featured a news story about other aboriginal people further south who had amassed in a great camp in an effort to stop a corporation from building an oil pipeline. Thousands of indigenous resisters were holding their ground. Tiqin had never seen anything like it. The film clips sent chills up his spine. Seeing others fight back informed him that there was something to fight for, this he always knew in his heart but he had never before known that it was possible. He went online to read more about this news story, he soon found out that the corporations and the government had clandestine counter-insurgency agents in place doing everything possible with all the means they had to quell the rebellion. He read an article discussing the views of some tribal leaders that the people should compromise, make a deal, and that the resistance camp should be closed down. At first this exciting story served to greatly inspire Tiqin, but then as he investigated it further he saw it was the same old story he had witnessed over the years in his northern home, only on a much larger scale. At home most of the people had also tried to resist the pipelines and the mines but soon their efforts were also sold out in exchange for a deal by their tribal leaders. It was here that Tiqin came to the clear realization that it was the people's wholesale dependency on, and addiction to, all these foreign industrial goods which dominated them, always annihilating their strength and honor. But while the people down south were hemmed in on small parcels with almost no other way to survive but to play along, Tiqin's people were surrounded by thousands of miles of wild country. A place where a family or a clan could effectively build a wild hunter-gatherer lifeway, in a manner akin to the ways Tiqin's ancestors had lived for thousands of years before the conquering industrialists invaded their lands.

In the hotel that night Tiqin's internet search led him to more links, stories about radical ecological resistance by various groups of people. He really enjoyed reading about these things; he found inspiration in knowing that such people existed in this world. He wondered what he might be able to do in this regard at home. Could he rally the other youth from his village to fight against the powers that be? Where would that go? Maybe he could become a saboteur of the infrastructure at the gold mine development in the mountains two days walk from his village. "Nah," Tiqin thought to himself, "it would be pointless." If the thousands of resisters down south were so easily caught or subjugated, the few Dnayi people who might heed his rally-

ing cries likely wouldn't last very long, in the face the overwhelming resources, technology, and power possessed by the mining corporation and government law enforcement, with their helicopters and airplanes there was hardly a place to hide, even in this vast remaining wilderness.

A sense of hopelessness pervaded Tiqin's mind. Anger rose up. Tiqin started to think there was no point at all in returning home to the village. There was nothing but despair. He was beginning to grasp the cause, but solutions seemed completely unavailable. He became enraged and felt like lashing out, he fantasized about attacking these city people, taking some of them down and going down into his own flames. What was the point of hunting anyways if the world was destined to go in this direction, if he always had to find a way to buy a new box of rifle ammo? He pondered all of this and fell deep into futile negativity. He almost lost it all. He looked at his little sister, who had returned to drawing pictures with the complimentary hotel pencil and paper pad, seemingly recovered from her disappointment in not getting a smart-tablet. He looked at his mother who wasn't feeling good from eating too much city food and who was talking about getting back to the village so that she could get back to eating "native foods"; moose, salmon, caribou, whitefish, beaver, frozen berries whipped with bear fat. Tiqin didn't want to stay in the city anymore and he didn't want to die, he knew that if he stayed we would surely die, if not in body, surely in spirit. He felt deeply that he wanted to somehow do damage to this civilization of relentless machinery and technological domination, and its manifest destiny, taker-culture mentality. But he could not wrap his mind around the logistics of doing that successfully. He felt as if such a thing would provide momentary feelings of release but that he would still be left in despair. Tiqin became suddenly desperate to return to the land. He needed this city context to make it clear to him that his river, lake, forest, and mountains were his only hope, his sister's only hope, his mother's only hope, the only hope for all the other kids at home in the village.

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Back in the remote country, walking along the beach, Tiqin recognized the forms of people approaching the village along the lakeshore. A bit startled and incredulous, Tiqin rubbed his eyes and looked again, rarely did anyone walk along the shore like that anymore and especially in a group of five, or perhaps six, people. Sure enough, how-

ever, there were people coming. Strangers. With a strong internal urge to investigate these people, Tiqin picked up his pace walking along the shore.

Travelers. Tiqin had heard the stories of people who still traveled the land, he thought they were only ghost stories. Yet before him stood six smiling Dnayi on the beach carrying heavy loads; camp kits, moose meat, and skin. “Eeee-ah Little Wolf!” one of the travelers called out to Tiqin. “We’ve taken ourselves a nice moose! We shall camp here on the lake for a while. There is plenty of meat, come and eat Little Wolf.”

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As the travelers made camp and ignited their fire, an excited and awe-struck Tiqin stood and listened to their story. The man was Tsayan and his partner was Dghili. The elder couple were Tsayan’s parents, Kenquq’ and Eсени. The young male, just a few years older than Tiqin was Tustes, Tsayan’s younger brother. Binik was Tustes’ female companion. These Dnayi were relatives of the people who lived in Tiqin’s village. About ten days walk to the north of Tiqin’s village existed another Dnayi village whose people shared a long history of connectivity to Tiqin’s people. When the salmon came the ancestral bands set up summer salmon camps on the various rivers. Just as did Tiqin’s ancestral band, Tsayan’s band used a camp which became a permanent village after the industrialists came. But Tsayan’s great grandparents were members of an outcast sub-band who called themselves Htsaht’ana (the first people) and who preferred to stay in the mountains, moving camp with the seasons in the old way; hunting caribou, bear, mountain sheep, birds, and trapping whitefish in high country streams and lakes. Kenquq’ and Eсени were born into the Htsaht’ana. They both had tried village life once; school, commodity foods, government assistance, but there they always felt diminished when compared to the way they had been raised, so they maintained the old way of life in the mountains to the furthest extent possible and they raised their boys there, instructing them in all the old skills which allowed this outcast band to remain healthy, wild, and free. Nevertheless Tsayan and Tustes also did their time in the village going to school. Kenquq’ and Eсени thought they might need that, so that they could have an ability to navigate both worlds. They worried that the game, birds, and fish they had always depended on might not always be available because over the years the colonial sport hunters in their airplanes

had been hitting the caribou, sheep, and bear populations hard, and they worried about the impacts of more mines and more pipelines. Hunting was always more difficult every year so Kenquq' and Eseni reluctantly sent Tsayan and Tustes to school in the village out of fear that village life might be their only future. But since Tsayan and Tustes were born into the old wild way of living and their life experiences were always centered around their times in camp with their elders they were keenly aware of the virtues of the old ways in comparison to the mental numbness and physical decimation they felt while in the settled village.



As soon as school was finished Tsayan and Tustes would load up their packs and head up river back into the mountains to spend their time with their elders in camp. As Tsayan and Tustes became of age, village life became worse and worse; people fought more, increasingly abused alcohol and other substances, became more and more dependent on commodity foods, less and less reliant on wild food, and most of the people had become sick from all of this. Almost everyone in the village had lost the skills which Tsayan and Tustes had been lucky to retain through the dedicated teachings and lifeways of Kenquq' and Eseni. They could clearly see the contrasts between the two worlds they had been attempting to navigate. When they could no longer withstand the despair of the village they knew they must make the choice either leave or to stay. They consulted with the two women who they had grown to love. Dghili' and Binik had also made the trek to camp a few times over the years. They had also seen the discrepancy between the two worlds and they not only greatly admired the skills, ability to work, and mentality of Tsayan and Tustes, they both

had fallen in love with them as a result. And thus they too elected to abandon the village and risk it all on an attempt at life in wildness alongside this outcast Htsaht'ana band, the final holdouts from the times when the people lived vibrantly and not in the constant state of despair which they lived in now.



Through all this the small Htsaht'ana band had successfully maintained their semi-nomadic lifeway ever since Tsayan, Dghili', Tustes, and Binik had joined full-time. But things were not easy. All of the older members of the once larger band had passed on and retaining the younger people was always difficult once they had a taste of convenience, electricity, commodity foods, and social media. Moreover, Kenquq' and Eseni were getting older and less physically able. The situation was becoming more desperate. It was truly up to Tsayan, Dghili', Tustes, and Binik to somehow carry on, or all would be lost to acculturation and domestication.

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As just a small group, without the capacity to rely on a larger community network of bands, the struggles were consistent. And the land and animals were becoming increasingly unpredictable. Kenquq' and Eseni had observed many changes. The seasons were no longer reliable. The temperatures across the year seemed to be getting warmer and warmer. In some places the small lakes were drying up, but in the mountains the ice was melting faster each year and the river banks everywhere were eroding due to the rush of water. Some of the old river campsites had disappeared, washing away to become part of the river. The boggy areas which had always been challenging to cross

had expanded and filled with more and more water. This was happening because underneath the bogs was permafrost; ancient frozen ground which was now melting due to the amplifying feedbacks associated with these warming events. Then there were the wildfires. For the past ten years it seemed it was always normal to smell smoke in the air during the summer time. Large expanses of forest and tundra had burned. Meanwhile, when the clouds came they usually brought heavy, cold rain at levels unprecedented from the past, which made troublesome accomplishing day-to-day tasks on the land. These rain storms now even occurred during wintertime, when the temperature would suddenly climb. Yet at night, and on clear, cold days, the waters which fell from the sky would freeze solid. Ice storms, Eсени said, that must be a spell placed on the land and the people for all of the horrible ways they have behaved since the colonizers came.

Stability in weather conditions was no longer reliable, so traveling was always risky, especially during winter when it became necessary to cross ice. For thousands of years the Dnayi had used snow and ice as reliable and optimal travel surfaces during winter and spring, but now things had become tricky. Fall freeze-up time always came later and spring ice break-up always came earlier. The trees and plants stayed green longer and began to bud and leaf earlier in the spring. Kenqu' noticed that some of the willows would begin budding in late winter and there were even areas where the plants stayed winter green under the snow. Tsayan had killed a caribou in early March and when he opened the stomach it looked as though it had been eating a summer diet rather than the caribou's normal winter lichen diet. Seeing the contents of the caribou's gut, a mesmerized Tsayan said to himself "this caribou has been eating like a moose". A winter caribou living primarily on willow leaves was unheard of in the past. Moreover, the large of herds of caribou which the Dnayi had relied upon for millennia had largely disappeared. They were still there but they had dispersed into smaller groups, shifted their range, and become very random in their occurrence. The Dnayi could no longer plan on intercepting the caribou at their traditional migration routes, water crossings, or calving areas. Instead they just had to hope they might come across a small group every now and then while out walking or hunting.

Through all these amplifying feedbacks, the entire landscape seemed to be experiencing a vegetation shift. All of the brush – willow, alder, poplar, and dwarf birch – was growing taller and denser. Riparian areas were choked with brush like never before and in the

mountains the shrubby plants had been colonizing the open tundra at higher and higher elevations. None of this was good for lichen-dependent caribou but it was good for moose, the earth's largest deer, which feed heavily on willow leaves. Moose had become more and more abundant in the Htsaht'ana's country over the last decade and the band had become increasingly reliant on moose hunting for survival. They missed their caribou, which were easier to hunt, easier to carry, and had skins which were easier to prepare and tan than moose skin. The massive moose provided so much meat and material that the small band of six had trouble preserving and eating all of the meat once they had a moose down, and moreover, moose skin was serious work to scrape and tan. But they made due, their life on the land had fostered in them the highest levels of adaptability – in wildness life always shifted according to how the land and animals changed.

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Within the curses, Eseni pointed out, there were also many blessings; moose were a gift and sometimes so was the warmer weather. Kenquq' told a story passed on to him from his great grandfather and which had been passed on since the Dnayi had arrived in this land. The story told of a time when the ancestral open tundra lands on the other side of the world got warm and slowly became a great forest. The old animals; mammoth, auroch, bison, Irish elk, cave bears, and caribou disappeared and new, smaller animals came; many species of deer, rabbits, birds, fish, frogs, and turtles. Some of the people followed the caribou, chasing the tundra as it receded north. Others adapted to a new forest-based life; a wild foraging life all the same. And others continued moving laterally, somehow crossing entire oceans and continents, eventually finding themselves in great new northern lands of seemingly endless tundra and caribou. Through these movements and adaptations, all was well and stable, again and again, for thousands and thousands of years. So much of Kenquq's story provided an analogue to what the Htsaht'ana seemed to be experiencing today and this ancestral history, along with their maintained capacity to live moment-to-moment and day-to-day, gave them great confidence, despite how scary things seemed to be at times. The many moose also gave them confidence, and so did their recent spotting of other new animals – mule deer and wood bison had come into the country followed by coyotes and pumas - all expanding northwards as their southern habitats changed.

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It was this entire fateful package of circumstance which brought Tsayan and his band with their freshly killed moose to the shore of Tiqin's lake on this day. And that evening, as the Htsaht'ana's shared their fire with Tiqin, he would learn of this powerful history and also how the changing conditions of the land had brought the Htsaht'ana to the lake and in Tiqin's presence on this day.

A few years ago, when rifle ammo was hard to come by, Kenquq' suggested the unconventional idea that Tsayan and Tustes learn to make the old longbows that the Dnayi relied on for hunting throughout the many millennia before the traders came. They spent several moons trying to get it right but eventually they became successful, learning how to ambush caribou at their spring crossing points with arrows tipped from scavenged, fire-hammered scrap metal. Their normal practice was to visit the village to trade fur or meat for boxes of rifle ammo. But this was never an appealing prospect. With the reignited ability to make and hunt with the old Dnayi bows, when they came across game within archery range, they would string up their bows and pursue the hunt in the old way. It was always harder and much less predictable, but nonetheless immensely satisfying to their spirit and life perspective. Old way bow hunting for Tsayan and Tustes was not simply a means to bring meat to the band: it was potent medicine.

A few days prior to the lake camp, Dghili' had been out gathering spruce roots and spotted a moose. She went quickly back to camp to summon Tsayan and Tustes. They strung up their bows and went for a look. The moose was still there. They decided to split up, each of the two stalking from a different direction to where the moose was feeding on the willow branches. Their stalking was very slow. They had to crawl silently through the grass and underneath alder branches and move against the wind. Suddenly, in mid-stalk, the wind shifted, the moose's ears perked up and it trotted off, away from Tsayan's scent and straight towards where Tustes had been laying behind a birch tree. Startled, Tustes quickly drew his bow. The moose stopped briefly right in front of Tustes, only about ten paces away. Tustes let go of his arrow and he watched it strike the moose – too low. The shot missed the heart and lungs and instead the moose had taken an arrow in the belly and run off with immense force, hammering through the trees and brush, the cracking sounds ringing out for a time until there was nothing but silence. Tustes was devastated. He had always been

taught to make a clean kill, not only for the spirits, but also because tracking a wounded animal was physically, mentally, and spiritually exhausting. Knowing what he was now facing, Tustes began to weep. When his brother arrived he gave him the news. They knew that the moose would die but that it would likely live long enough to be able to travel far. But they also knew that if they did not attempt to follow the moose it would probably lay down to rest somewhere close by. They decided to return to camp to consult Kenquq'. After consul, the Htsaht'ana elected to pack up and begin tracking as a group. They returned to the sight last seen and began following the moose's path through the thick brush, looking for signs of blood. Slow and careful observation revealed only small speckles of blood on the occasional leaf or blade of grass. They knew the moose would not bleed out soon and they knew the tracking would be precarious and slow. They decided it best to camp for the night and resume the search in the morning, with the thought that perhaps the injured moose would stay put, laying in one place as it became weaker.

A few hours into tracking the following morning Tsyah held up his hand, halting the others. He crawled silently forward on his own and then began to vocally mimic the high-pitched call of a cow moose. Suddenly the moose rose to its feet and at that instant Tustes, Binik, Kenquq', Dghili' and Eseni watched as an arrow struck the moose straight behind its front leg. It hit hard and deep. A good arrow this time. The moose darted a short distance then crashed to the ground. Its life was gone.

The tracking journey required to complete this hunt had led the band further downriver into the forest than any of them, other than Kenquq', had ever been before. They would be busy for several days now, cutting meat, drying meat, boiling bones, making wonderful nourishing soup, drying sinew, fleshing and de-hairing the skin, and tanning it. For all this they preferred a better camp than where they were at the moment: in a deep forested river valley which provided little open, flat space for work and for a comfortable camp. Plus they had more meat than they could eat or carry. Kenquq' knew that eventually the river led to Tiqin's lake and to the Dnayi people in the village. They would go to the lake to camp and they would bring some meat to their all-but-forever-lost relatives in Tiqin's village.

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While Dhgili', Eseni, and Kenquq' skinned and quartered the moose,

Tsayan, Tustes, and Binik went to locate and cut some long green willow poles and gather more spruce roots. They would bend the willow poles into a frame for a hasty moose skin boat, the old way of transporting heavy loads of meat down creeks and rivers. The frame was bent and lashed in-place with strips of spruce roots and then cross beams were lashed to the frame. Eseni and Dghili' fleshed the skin and the group worked together to cut two large thin strips of rawhide from the perimeter of the skin. At every fist-width length, holes were punctured around the circumference of the skin and the first long strip of rawhide was used to lash the moose skin tight to the frame. The boat was placed in the water and the second thin strip of rawhide was used to tie it off tight to the riverbank. Then the moose meat and all of the bones were placed inside of the skin boat. When all was prepared the Htsaht'ana began their downriver journey. They would take turns guiding the boat down to the lake by use of the long strip of rawhide rope and by occasionally jumping in the river when it became shallow and pushing the boat along. They figured they could get to the lake before dark and then they would turn towards the village and look for a good place to camp. And, as such, here they were now, sitting with Tiqin, readying the coals for the night's feast of moose meat, moose fat, and moose bone soup.

Fate had made Tiqin the honored guest of the evening. Tsayan explained that they were very happy to have him, that in his deepest heart he desired, above all else, to share the old ways he had learned from his grandparents and from Kenquq' and Eseni with as many young Dnayi people as possible. Tiqin was enamored. He had never felt so alive and with so much hope as in this moment sitting around the fire with these travelers, these wild people who had never given up on the old Dnayi ways that Tiqin had only heard about in lectures from village elders and in school. It was here that he knew why he had always been drawn to the lake and why, throughout all his despair, he had never given up hope and succumbed to the nihilistic and escapist tendencies of his peers. On this night, nourished by fresh moose fat, marrow, organs, and flesh, sitting by the fire with the most fascinating and hopeful people he had ever met in his life, Tiqin had been reborn into his ancestral clan.

With full bellies they sat around the fire as the lake water lapped on the shore. Stars came out. Eseni wrapped Tiqin in a warm caribou-hair blanket. Old songs were sung, stories about the moose hunt were told, and Tiqin heard many more amazing stories about the life of a hunter in the high country above. Tsayan said that in the morn-

ing they would walk to the village with a load of meat for the people. Tiqin said the people would not know what to think, that they had never seen such travelers, but that they would be happy and would be celebrated intensely. Tsayan told Tiqin about the moose skin boat and said that the Htsaht'ana would stay in this camp until their meat dried and until the moose skin was soft. Tiqin wanted to know more about the moose skin. "Tan it, how?" he asked Tsayan. "We would like to show you and your other Dnayi the Htsaht'ana way of softening the skins of the four-leggeds, Little Wolf," said Tsayan. Tiqin wasn't sure if he could get any of the other village people to help work on the skin, but he said he would try.

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The next morning Tiqin awoke lying next to the smoldering fire alongside the wild Htsaht'ana band in the lake camp. Dghili' put some fresh wood on the coals and then cracked a moose leg bone with a rock and placed it on the fire's edge. The group drank hot ch'vala (spruce) tip tea, ate some pieces of fresh roasted meat, and shared the golden heated marrow from the moose bone. Tsayan and Tustes each loaded a moose quarter into their skin bags. Binik checked the hanging meat and added some piles of rotten wood to keep the smoke going on the meat while they were away in the village. Tiqin ran ahead and excitedly told the others that the travelers were coming. As the Htsaht'ana arrived at the village community hall, energetic children and teens came to greet them, laughing, smiling, asking questions. Adults and elders began to arrive. Some of the elders knew Kenquq' and Eseni and recognized them as cousins from long ago. With appreciation, the village women happily received the moose quarters and began cutting off pieces for the large communal stew they would prepare. Any food the village had kept in its stores at the community hall was also prepared and offered to the guests. All feasted, talked, and reminisced. The children played, and the adults and elders heard stories and reports from the travelers about the hunting, fishing, and foraging conditions in the up-country. The village adults and elders were captivated and humbled by this visitation of people they thought only existed in myth. Hearing the stories, seeing the pieces of ancestral clothing and equipment carried by the travelers, receiving the meat, and knowing the reality of the Htsaht'ana's existence made the village elders happy. While the adults were also very happy, underneath they felt an unavoidable aura of shame. In their hearts they knew that their

daily choices were antithetical to the powerful physical and mental health and strength of their ancestors which these travelers portrayed. Tiqin also sensed this. But there was no jealousy or bitterness. The arrival of these travelers and knowledge of their true existence was the medicine that the village people had long needed. It was a revolutionary day in the village.

As the festivities of the day waned, the Htsaht'ana received invitations to stay at the village homes but they politely declined. They preferred to stay out and had meat hanging in camp that they needed to tend to. The travelers instead offered an invite to all from the village to come join them around their fire at the lake camp. Almost all of the village children vociferously called out "I want to go!" Tiqin didn't need to say a word, he knew where he was going that night and he went with some of the other teens to gather their sleeping bags and extra clothes. As the overnighers departed for the camp, Eseni announced to the villagers that in the morning the Htsaht'ana would begin preparing the moose skin for tanning and, not only was the entire village invited to participate, but that completing the work be much more enjoyable if some of the other people were to help out. This prospect brought excitement running through the veins of the gathered village people, especially the children. And while most would not go stay overnight in the camp, almost all would arrive in the morning to witness this curious thing which before they had only known about in stories but which they knew had helped their people survive on this land for eternity – the turning of wild skin into the material for sewing into the clothes which allowed them to survive through the winters.

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In the morning Dghili' and Binik found a perfectly smooth driftwood log on the lakeshore which they would use to make a beam for removing the moose's hair from its skin. They shaped the log and propped it up against an elder spruce. Tsayan and Tustes pulled the moose skin out of the lake, where it had been soaking for the previous day in order to loosen the hair, and then draped it over the driftwood beam. Kenquq' had crafted a hair scraping tool from the leg bone of the moose, the same type of tool used for hundreds of generations by hunting nomads all over the world. Eseni began chopping the hair off of the moose skin using this tool, explaining to the gathered children the correct movements. After the demonstration Eseni passed the tool to

a young Dnayi girl and told her to try. Joyously, the kids all took turns removing the moose hair. Kenquq' also showed them how to similarly remove the moose hair with a large flake of jasper stone. Along with the other travelers, and the village elders and adults, Tiqin observed in awe. He wondered if the others shared the same deep-heart feelings and same sense of bliss and emancipation that he felt watching the children and others all simultaneously engaged in relationship with each other, with the land, and with the spirit of the moose.



After the children had successfully removed all of the hair from the skin, the group worked together to lash it to a frame of spruce poles that Tsayan and Tustes had made. Utilizing the existing holes around the circumference of the skin and the long strips of rawhide used earlier for lashing the skin to the willow pole boat frame, the moose skin was stretched and tied tight to the spruce frame to dry for the rest of the day and night. The following morning the people would gather again to thin and scrape the skin in final preparation for the upcoming day of softening.

That night the people gathered around the fire for a feast of moose, caribou, salmon, beaver, ducks, berries and other foods which each of families pulled from their stores and brought to the camp. Kenquq', Eseni, and the other village elders all took turns telling stories. Almost forgotten and nearly forever lost oral histories of the adventures of the ancestral Dnayi peoples; life before the traders and merchants came, before the people settled into the villages and began relying on commodity foods and oil. There was much quiet amongst this crowd.

Many fell asleep around the fire and others returned to the village to sleep.



The following day all the people took turns diligently scraping the stretched skin. Sharp stone was used to thin down the rump, shoulder, and back strap sections so that the skin would evenly absorb the brain juice which the skin would soon be soaking in. Eseni fashioned a large tub from great pieces of birch-bark, sewn together with spruce root and waterproofed at the seams with melted spruce pitch mixed with charcoal and pounded moose dung. The tub was filled with water which was brought to boil by rotating in and out hot rocks from the fire transported by spruce branch tongs. The brains of the moose had been mashed on a flat rock and then dumped into the steaming water. Dghili' diligently mixed the brains around until the oils cooked into the water. Meanwhile, the perfectly scraped and prepared moose skin had been re-hydrating in the lake. Once the brain juice was cool, Tsayan, Tiqin, and a few of the children carried the skin to the birch bark tub and gently placed it in the brain juice, then weighed it down with large rocks so that every part of the skin would be submerged. Every few hours through the night and into the following morning, Eseni would stir the skin around in the tub, making sure that the brain juice was fully absorbing into all of the fibers.

That evening Kenquq' spoke to the group of children, teens, adults, and elders who had gathered around the fire. "We hope that many or all of you will come here tomorrow to spend the day working with us again. To finish softening this great moose skin will be a full-day's hard work, but if we do this work together, in the old way, as a community, it will not only be less work for all, it will be immensely

enjoyable and spiritually rewarding for each of us. Around this time tomorrow night, at the very end of the day, just when all of us will be tired and ready to eat and lay our bodies on the ground, we will together experience the magic moment where this skin has transformed into softness and then can be used for making the clothing which has allowed us and our ancestors to survive our many cold winters here on our lands for hundreds of generations. I very much wish that you all will be here so that we can share this magic moment together.”

The next day began with Tsayan, Tustes, and Tiqin taking the skin from the tub, tying it to the branch of a large spruce tree at one end and then using a long smooth stick to twist the skin tight, wringing out the brain juice. This twisting was done in cooperation between the three of them, each holding and twisting the rotating branch as it came towards them. After the liquid was drained from one side of the skin, it was re-tied from its other end and wrung out in the same manner from there. After this, the skin was placed back into the tub. This wringing process helped to increasingly open up all of the skin fibers to absorb more and more of the moose brain juice. Before the group could begin stretching and drying the skin it would need to be wrung and soaked three or four more times. When the children arrived in the morning, they all took turns helping twist and ring the skin. Tiqin and the others wondered if they had ever seen the group of village children so enthusiastic, cooperative, and happy amongst each other before. Magic did seem to be happening and all could feel this deep in their hearts and bones. The sun began to shine, first on the lake water and then on the camp, bringing in a feeling of warmth and security which underpinned the powerful feelings of community the people were experiencing.

After the final wringing, the skin was spread out on the ground for all to see and to absorb a bit of the heat coming from the sun. Eseni asked the people to gather around the skin. She began speaking: “Now we will begin our work as a community of Dnayi. We will create magic. Yet all Dnayi must be committed from here until this skin is completely dry. The rule is that the skin must be stretched until it is dry. We need to rub and stretch every fiber of this skin until there is no more wetness anywhere on the skin. Now let us gather in a circle and hold this skin together and begin stretching it up and down and from side to side. We can talk, we can sing, but we cannot stop stretching. When someone gets tired they should rest and one of those who is resting should be available to fill in our moose circle circle.”

The people then gathered around to hold the skin. As they began

to stretch the skin their faces stretched into smiles. The Htsaht'ana had purposely stayed quiet, as they were certain the next and most important hide tanning step would occur naturally among the people. It was only a matter of seconds before one of the village children yelled out "I want to jump on the skin!" "Yeah! Can we jump? Can we jump? I want to Jump!" followed several of the other children. "Of course you can jump! We need each of you small ones to jump on this skin all day long," Kenquq' answered back. Abruptly a small girl was lifted onto the skin. As the people held tightly around the perimeter of the skin they began pulling back and then letting the skin slack down. Pull, slack, pull, slack. At first the small girl began to bounce, chuckling with each toss. As the momentum picked up, the force of the pull grew stronger and the girl began to bounce higher and higher. She screamed with delight each time she flew through the air and all of the people began yelling in elation, cheering her on. The kids each yelled "my turn!" "My turn!"



All were laughing uncontrollably and eager to jump on the skin. With every pull by the group, and every bounce of a child, the fibers of the moose skin were stretched in every direction and the friction of the human bodies generated heat which assisted in drying the skin as it stretched. Tiqin was awestruck by the village adults and elders cheering and laughing like he had never witnessed before. There was a sense of a healing, a return of community. Nobody wanted to leave the camp. Nobody wanted to be alone. They all wanted to pull on the skin and watch the children fly through the air. Naturally, the children began to master their hide jumping; some did kicks and flips,

they learned to time the stretch of the hide perfectly so that it would launch them into the air as high as possible, sometimes double or more the height of the adults' heads. As the hours went by the people's energy never let up and the laughing and smiling never stopped. Tiqin also noticed that tears were falling from the elder's eyes and that tears were falling from some the adults eyes as well. Tears were falling because it was like the people had finally come home, finally returned to themselves. Tiqin looked around and saw that Kenquq', Dghili', and Tsayan were also crying. Eseni was sitting on a log next to the lake weeping. She was both weeping from joy and also from her realization of loss. All those years living in the mountains without community. Eseni had not seen a moose hide finished in this communal way since she was also a young girl jumping on the skin with her brothers, sisters, cousins, and clan children.



As the daylight began to fall Kenquq' walked up to feel the skin, it was nearly dry and was soft like the fur of a beaver. He called out, "my friends! You have learned the ancestral way to soften the skins of the four-legged beings who always keep our bellies nourished and our blood warm during the winter snows. Soon the skin will be finished and night will come. The moose meat we will take with us on our travels is dry and tomorrow we will begin our journey back to the mountain country. The seasons are changing and the caribou will soon return to the high tundra. You are always welcome to come find us, hunt with us and share our fire. May the four-legged spirits bless your village with their meat this winter. We hope that you will also take their skins and do as we have taught you. The skin of the four-leggeds brings together the people, unites them, and inspires the children to work hard, to always reach high, to float above the clouds. And the magic moment when the skin is finished teaches us that when we have connection to the wild spirits and to each other we do

not need the deceitful, poisonous products of the conquerors to survive as a people, we only need each other and the land. So go people, return home with these days of healing, this reborn knowledge and inspiration and never again let it go.” “Eeeeeaaayhhhh!” replied the village and the travelers in unison. The fire embers at the lake camp slowly began to die. Tiqin was the last of the village people present in the camp. He got up and embraced each of the Htsaht’ana. “Chi’nan (thank you), my family. I shall never forget you. One day I will find your mountain camp. For now my place is here, participating and inspiring the rewilding of my people. The day that you came I was the most hopeless Dnayi boy anyone could know. But today you have saved my life. I will always walk in your spirit.” “It is our honor,” said Kenqu’. “Good luck, little wolf,” Tsayan called out, as Tiqin walked into the night along the shore of calmly lapping moonlit waters.

As the Htsaht’ana walked away, the village Dnayi knew the answer – it was time to get back to it, time to live again. Hope existed in wildness. Hope existed in the peoples returning of their minds and bodies to the land, the embrace of its beings, and their return to daily intimacy with each other. The outside world of individualist consumers and of controlled and domesticated production and profit offered no hope. These entities were quickly destroying their own world. But there was hope in the fact that the human domesticates would soon annihilate themselves and no longer be able to keep destroying the earth, that once the domesticators were gone the earth would begin healing itself and that in this remote pocket of Dnayi, wildness would be re-born and endure.

It was all clear to Tiqin now, hope was extant in the wild land and in the wildness of the Dnayi and this is why he had never given up on his daily meditations sitting on the trunk of a fallen elder cottonwood tree, just hidden out of sight of the lake shore next to the small creek which drained into the lake from the mountains above. Wildness was the reason why the only time he felt better was when he went to sit in the forest, next to the creek, above the lake, below the towering mountains. Now that Tiqin’s people would be with him rather than separate from him in these daily meditations, inspired by the Htsaht’ana to become physical action, there was hope, against all odds they would begin living fully in their potential as human beings as vital and viable constituents of an animate earth.



Weaving is a process of interlacing slender and flexible fibers to make a fabric. People everywhere have used native plants, animal hair, and other sources to devise shelters, fishnets, bowstrings, floor mats, cushions, carrying bags, water bottles, etc., as well as garments. Today machine-made synthetics pollute the earth and threaten species.

Any weaving, even the most elaborate and accurate, can be done with a minimum of mechanical aid. Looms arrived relatively recently. Perhaps more than any other creative form, what is woven and how it is woven is closely related to its social context. Traditionally, textiles are not about “saving” time or developing division of labor, which obeys the clock. Work, art, play are not separated, do not exist as distinct dimensions. Weaving was not done by specialists; it could be done by women, men, or both.

Plato and Aristotle denigrated handcrafts as involving an inferior grade of knowledge. Its “feel” cannot rise to true understanding, in line with those philosophers’ general dismissal of sensual and direct experience. In its own way, Kathryn Sullivan Kruger’s *Weaving the Word*¹ conforms to their bias. Kruger finds in textiles the origin of the written text, upholding the symbolic over the actual. In fact, “textile” is related to “texture,” not text. *Textere*, to weave, and *textura*, texture, in Latin. There is an intimacy that is lost to an overall de-skilling, as civilization advances. To put the text, the symbolic, as the desired result is to devalue the texture of the woven. The path of technological progress is the triumph of the symbolic. This involves an increasing separation of conception from execution, as Browerman points out.²

No one knows when, with very simple tools or none at all, the

first cloth was made. Possibly the first needles, found in what is now eastern Europe and Russia, date to almost 26,000 BCE.³ Bone needles with eyes so small they could only have been used with very finely-spun thread have been found from the Magdalenian period of the Upper Paleolithic in Europe, 17,000 to 12,000 years ago.⁴ The oldest known fragment of a textile or basket was discovered on clay fragments in the Czech Republic, 27,000 years old.⁵

Botanists have estimated that over two thousand species of plants produce fibers, including at least one thousand in North America alone. The use of fibers gathered from wild cotton dates back much earlier than the introduction of domesticated cotton. In sub-tropic areas, wild cotton often grows as a 15- to 20-foot tree, with a 10-year quality yield.

There is archaeological evidence that baskets were used in California four millennia ago.⁶ Three types of woven sandals have been found in the high desert of eastern Oregon, once belonging to hunter-gatherers more than 13,000 years ago. Margaret Susan Mathewson, writing about Native weavers in California, noted that “Indian people view basketry traditions as one of the strongest ties to their past lifeways.”⁷ According to traditional weavers, “Plants must not feel as though they were simply uprooted and taken away. They must be treated as any other valued member of society.”⁸

In *The Romance of French Weaving*, Paul Rodier expresses the opposite and inaccurate orientation, in favor of civilization: “And when a loom is waiting the night of savagery is over.”⁹

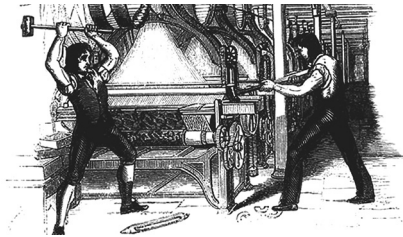
I have long been drawn to the story of the 19th century English handloom weavers. They were the heart of the Luddite risings during the first two decades of the 1800s.¹⁰ Their struggles personify autonomy and resistance in the modern history of the West. Probably England’s biggest single occupational group, there were about a quarter million weavers in the early 1800s, a number that grew until the 1830s.

Long accustomed to a casual attitude toward work, the weavers of Manchester “never worked six days in a week; numbers not five, nor even four,” economist Arthur Young observed in 1770.¹¹ Displaying “the old artisan craving for independence,” as J.F.C. Harrison put it.¹² Such irregular habits were certainly frowned upon by the managers of English society, who would have preferred docility. Handloom weaving was essentially a family affair; the family mode of production was incompatible with, even opposed to, productivity and surplus. Neither age- nor gender-specific, weaving—for a time at least—took

place only when time and inclination suited, within the family and with quality goods a priority.

Class strife was “erupting with increasing frequency” by 1750, with weavers in the forefront.¹³ Food riots were almost constant in the countryside, and it was very difficult to enforce control, especially over the scattered and recalcitrant handloom folks. Significant embezzlement of yarn from their employers was another weapon used by the weavers to great effect.¹⁴ The fact of being dispersed or scattered has often been seen in a negative light, as detrimental to solidarity or joint action. But weavers were in touch during their weekly visits to take product to their employer’s workshop, not to mention meeting at the local alehouse.

Herding the populace into factory discipline and obeying the clock was the recipe for the triumph of domination of the workplace. Industrialization was a striking historical development, heralding a much-needed advance in domestication. This proved hard to achieve, involving decades of protracted struggle. Factory enthusiast Andrew Ure, much cited by Karl Marx, conceded that it was nearly impossible to convert persons past the age of puberty into power loom hands.¹⁵ The earliest factory weavers were children and women, seen as less intractable than men. Very soon the battle against the Machine was joined. In 1792, for example, irate handloom weavers burned Grimshaw’s factory at Manchester, which had featured the newly invented Cartwright mechanized looms.



The widespread Luddite risings between 1800 and 1820 enjoyed enormous social support. With the anti-mills weavers at its heart, the movement probably reached its peak in 1811-1812. Hammers and torches were wielded in great numbers, and the authorities were stymied by the “nearly unanimous sympathy manifested for the Luddites.”¹⁶ As the second decade of the century waned, so did the fortunes of the handloom weavers; a profound rear-guard orientation set in. In 1826 there were several days of widespread loom breaking in Lancashire, but industrialization was plainly winning.

The Plug Riots of 1842 consisted of marauding bands who de-

stroyed the plugs of steam boilers, shutting down power. Handloom weavers held on even into the 1850s and beyond. Pressures increased; the decline in living standards was relentless and dramatic. Marx and Engels rooted for the handloom weavers' demise, calling for an end of resistance to proletarianization. The weavers' long retreat raises the question why so many people chose miserable poverty for so long. Their commitment to an independent way of life was evidently very deep-seated. A richness of social bonds was at stake. Like their Irish counterparts, when men finished their other labors they sat and carded wool for the weaver women, all sharing the latest news, singing, telling stories. They chose autonomy, and tried to defend family and community. "Thus passed away," wrote power loom historian Richard Marsden, "a type of industry, picturesque far beyond its successor."¹⁷

Resistance by weavers didn't begin with the Luddites. In 265 A.D. the Gallic weavers of Arras went on strike against the occupying Romans, depriving them of their clothing supply. Arras weavers struck again many times, notably in 1578. Weavers were among the most militant workers in medieval times, especially in Flanders, very often resisting new technological developments.¹⁸

In the 1760s and 1770s in colonial New England, a spontaneous boycott of British textiles meant that the weaving and wearing of homespun cloth appeared, as a weapon against rule from London. "Homespun" was actually finely woven and often colorful cloth, not a dull or crudely made class of fabric.

Gandhi spearheaded reliance on hand spinning and weaving in the 1930s, to deprive Britain of its large textile exports to the Indian subcontinent.

In the American Southwest, indigenous people wove baskets and sandals with a double twining method, without using a loom. This finger-weaving approach is much more flexible; stitch and color may be varied at any point. The earliest inhabitants in the Southwest lived in small mobile groups, disinclined to carry looms with them. They relied on the life around them for all their needs—especially, increasingly, wild cotton for cloth.

With cotton domestication, commencing at about 900 A.D., loom-type devices appeared and became slowly more complex. Complex society means more complex technology.¹⁹ But weaving remains a link to traditional lifeways, a vital connection in preserving reciprocal relations between Native people and their desert homelands.

Reminiscent of the trajectory of the English handloom weavers, Kathy M'Closkey points out that from the 19th century on, "the

more Navajos wove, the poorer they became.”²⁰ Why Navajo women continued to weave under worsening conditions involved resisting technological innovation. They chose to not produce standardized, decontextualized textiles, and placed no value on time-saving “efficiencies.” The clash of perspectives is obvious.

Society is woven, as much as anything that weavers have woven, and continue to weave. The connection is a deep one, with many variations. In Himalayan Ladakh, where women do not weave, it is said that “women spin threads that hold together the social fabric of society.”²¹ The Dorze weavers in Ethiopia, as yet untouched by mass markets and fashion trends, create traditional handwoven textiles for everyday life with very simple implements.²² Bedouin Arabs, with their legendary generosity and self-reliance, are very mobile and therefore also weave with very basic equipment. In Guatemala, indigenous Mayans have stood against pressures of change and military assaults, armed importantly by traditional weaving.²³ The T’boli people of the Philippines cleave to the old ways and community via weaving, with its spiritual and Native-oriented basis.²⁴ Maori people share many handweaving techniques with indigenous cultures elsewhere, and exhibit an emphasis on war and hierarchy.²⁵

As Lynn Teague points out concerning some decorative textiles from late prehistoric North America, one can see in their temporal and spatial depictions “the development of hierarchically organized society and specialized ritual functions.”²⁶ In a similar vein, Theodor Adorno could draw out much of the structure and tensions of society by examining the formal elements of its music.

There is nothing magic or transcendent to be found in the histories of weaving, no radical kernel to serve as a triumphant weapon against domination. But in our deskilled and disempowered condition, there is certainly much to learn from weavers about autonomy and resistance. This cursory survey introduces some of the implications of their struggles. From their material inspiration we can learn some of what we need for a primitive future.²⁷

ENDNOTES

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- 9 Paul Rodier, *The Romance of French Weaving* (New York: Tudor Publishing Co., 1939), p. 1.
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- 25 Teague, *op.cit.*, p. 188.
- 26 Julie Paama-Pengelly, *Maori Art and Design: Weaving, Painting, Carving and Architecture* (Auckland, NZ: New Holland, 1010), e.g. p. 18.
- 27 For more on a "primitive" future, see John Zerzan, *Future Primitive Revisited* (Port Townsend, WA: Feral House, 2012).



Tech enthusiast Kevin Kelly has often repeated a glib definition of technology as “anything invented after you were born.”¹ The flippant definition resonates because it is very close to how the word is used in casual conversation and in popular media. The iPhone is generally perceived as technology but a manual can opener is not. The tech section of a newspaper will readily feature an article on drones but not necessarily on dovetail joints. Moving back and forth between a casual definition and a more precise definition can yield a rhetorical advantage for technophiles like Kelly. If a new technology seems threatening, disruptive, or otherwise problematic it can be compared to an older technology which may seem safe and familiar. The new technology then becomes safe by association because it is alleged that to condemn one is to condemn the other (and who is going to blame the ills of the world or the corruption of youth on the can opener in their kitchen drawer?).

This strategy exploits the fact that anti-tech critics have a reputation for being a bit curmudgeonly; their arguments are often dismissed as nothing but a collection of *these kids today!*-type complaints. Their position is treated as an outgrowth of their own confusion and technical ineptitude: we are to believe that they are all old people who can’t manage to program their VCRs and drone on about “the good ol’ days.”

Given this caricature, it is important for serious critics of technology to dig deeper and make clear the problems with technologies that were invented long before they were born; to critique the technologies that are so commonplace that they often fail

to even register as technologies. The point must be made that it is not simply that the new and the novel are threatening or confusing due to their unfamiliarity, but rather that even those technologies that are entirely familiar, wholly ubiquitous, and seemingly quite banal have often been, in many ways, quite detrimental to our overall well-being.

To overlook the damage done by technologies prior to our birth, those that are now ubiquitous, is akin to ignoring the damage to the environment carried out in earlier ages. It is a common mistake to treat the state of the natural world during one's childhood as a sort of baseline from which to measure the damage done. But that baseline recedes with every generation; everyone alive today was born into an already devastated world. Likewise, we are all constrained, controlled, injured, and mutilated by the technologies that were introduced long ago.

Consider, for example, recorded music. This purported luxury that is so highly valued by so many of us has, in many ways, contributed to the widely felt emptiness of the modern experience. It is an inadequate substitute for something greater of which we have been robbed.

Recording Music

Small-time musicians have become as obsolete as the Indian.
-The Nation (1942)

For quite some time now, to make a record has been to make it as a musician. In the dominant culture, a recording contract imbues legitimacy and is a clear marker of success. Countless musicians have relayed the giddy experience of hearing themselves on the radio for the first time or of watching their record climb the pop music charts.

In his recent autobiography, Bruce Springsteen described the incredible feeling of being signed by Columbia Records: "I felt my heart rise up inside me, mysterious particles dancing underneath my skin and faraway stars lighting up my nerve endings." Indeed, there is a significant difference in the status of one who is labeled a mere musician and that of a "recording artist". Springsteen was a musician long before auditioning for Columbia Records but only became a recording artist when offered his first contract. His status changed and he marveled about his good fortune saying: "we'd climbed to the heavens and spoken to the gods who told us we were spitting thunder and throwing lightning bolts."²

It may therefore seem quite odd to learn that in 1942 the American Federation of Musicians (AFM) imposed a ban on recording music which was sustained until November 1944. The ban received widespread support within the labor movement. It was formally endorsed by the American Federation of Labor. International support came from the Musicians' Union of Great Britain which supported the ban by refusing to export records to the United States and Canada.

The AFM and its members perceived recorded music as a threat to the livelihood of musicians who at the time relied primarily on live performances rather than making records. There was little or no profit to be made from records or radio play. Yet, as the sound quality of phonographs gradually improved, radio stations were dumping live acts and jukeboxes were displacing musicians in hotels, bars, and restaurants. From our present point of view, jukeboxes may seem fairly inconsequential, but in 1938 there were already half a million in use in the United States accounting for forty percent of record production.³ By 1950, "jukeboxes were everywhere" and in all manner of businesses and community spaces.⁴ By the time of the ban, theaters had already largely stopped employing orchestras as silent films were replaced with sound films. Prior to sound films, theaters employed a large portion of AFM members as pit musicians. As recorded music was embraced opportunities for working musicians seemed to be shrinking.

James Petrillo was president of the AFM at the time of the recording ban and explained:

Nowhere else in this mechanical age does the workman create the machine which destroys him, but that's what happens to the musician when he plays for a recording. The iceman didn't invent the refrigerator, the coachman didn't invent the automobile. But the musician plays his music into a recorder and a short time later the radio station manager...says...we don't need you anymore.⁵

Petrillo was a high-powered labor leader who proved himself in union battles as president of AFM Local 10 in Chicago during the 1920s and 30s. His first major accomplishment in Chicago was forcing radio stations to actually pay musicians. Note that this was not paying musicians for use of recordings but paying musicians for performing live on the radio from the station. Radio stations had always argued that publicity alone was sufficient compensation for such performances. Two years later, possibly as a response, Petrillo's

home was bombed. He would eventually begin traveling in a bullet-proof car equipped with bullet-proof windows.⁶

Punching up or punching down, Petrillo was known for an aggressive style that frequently got results. When an Italian jubilee was set to use nonunion musicians in Chicago he sent a cable of complaint directly to Mussolini. Likewise, when a high school band was set to perform at the mayor's inauguration, Petrillo threatened the radio station that was going to broadcast it with a strike and consequently the high schoolers were replaced with union musicians.⁷

By the time he became president of the national AFM, he already had his sights set on tackling the threat represented by recorded music—or as he frequently called it, “canned music” or even “dehumanized music.” He became president in 1940 and the ban was put into effect in 1942.

The principal concession won by the AFM via their recording ban was the creation of the Recording and Transcription Fund which directed a royalty from the sale and manufacture of recordings and transcriptions directly to the union for use in creating work for unemployed musicians and offering free concerts to the public. Prone to hyperbole, Petrillo declared it “the greatest victory ever achieved by a labor organization.” In any event, it was a short-lived victory as the Fund was dissolved in 1947 with passage of the Taft-Hartley Act.

This prompted a second recording ban in 1948. The Recording and Transcription Fund was soon replaced with a fund that served a similar function. This new fund was not under the exclusive control of the union and was thereby within the bounds of the new law.

The touted victory underscores the point that the AFM was never explicitly against recorded music as such despite some of Petrillo's heated rhetoric. “For the union, its primary objections were not about the record but about the unlicensed duplication of artistic labors.”⁸ Consequently, what they sought was not the abolition of any particular technology, but rather a mechanism for musicians to be compensated for their work and share in the profits made from such recordings.

But the impact of recorded music extended far beyond the immediate financial concerns of working musicians who struggled to cope with shifting technology. The act of recording music changed how music is made, how it's performed, how it's consumed, and how it is sold.

Music is what people do on their own.
-Tom Vanderbilt (2016)

Once music is recorded, reproducible, and effectively commodified it creates a situation where “[m]usic escapes from musicians.”⁹ The role of the musician isn’t simply financially uncompensated as was the chief concern of the AFM, but music itself is diminished in significant ways for both the musician and the audience.

First, the ability to repeat a song at will (and often ad nauseam) alters how it is experienced and what gets produced. In *Innovation and its Enemies*, Calestous Juma effectively makes this point:

*Recorded music introduced [an] element that didn’t exist with live performance. Recorded music could be played repeatedly at will... The ability to repeat elevated the role of the sound technician and made the musician subservient to technology and, by extension, to those who controlled the sound production...*¹⁰

On the surface level, this mirrors a concern expressed by Petrillo and the AFM. They saw and were concerned that disc jockeys, broadcasters, and other non-musicians were ascending in influence at the expense of their membership. Non-musicians stood to profit to a much greater extent than the musician who actually performs on the record. Musicians were paid once for a performance that was recorded whereas non-musicians profited each time the recording was played.

On a deeper level it also mirrors a concern put forward by many critics of technology. Records are presented as a means of making music more accessible and giving the listener greater control—greater control is effectively what all technology promises. But what is given with one hand is surreptitiously taken, with considerable interest, by the other. Listeners can repeat a song if they wish, but the fact that music that is increasingly controlled by corporate executives, experts, and technicians shrinks the role of the musician and limits what gets produced and distributed. The distance between musician and audience is magnified as the listening experience is increasingly mediated. The musician’s overall contribution to the final product shrinks as an increasingly intense division of labor is imposed via the recording process.

Digital technology exacerbates this situation—despite promising even greater control of one's experience—as the repeat function relies on just the push of a button. I have encountered numerous people who profess a great love for music, maintain a large digital collection, and yet are seemingly unable to listen to a song in its entirety. Their listening experience seems to consist largely of playing a song for perhaps a minute or so and then anxiously clicking to find a different one. For example, someone recently wanted to share what they described as their “favorite song” with me, but we only listened to about twenty seconds; in response to my confusion, I was told that that was “the good part” of the song. Even one's favorite song isn't worth listening to in full. It is perhaps related to the phenomena of people watching television shows on fast-forward to get through more shows in less time. Even one's recreation must be rationalized and made efficient.

Second, while live performances obviously haven't disappeared, recordings have altered their meaning and content. Juma again explains:

As time progressed, live performances were judged on how they compared with the recorded versions. This was often detrimental to musicians as fewer people attended live shows. Musicians often felt pressure to record a perfect version of a song because they knew it would be mass-produced and repeatedly played.¹¹

George Harrison made a similar point in 1965:

[The Beatles] used to improve at a much faster rate before we ever made records. You've got to reproduce as near as you can, the records, so you don't really get a chance to improvise or improve your style.¹²

Upon first reading, this seems an odd statement coming from someone like George Harrison given that the Beatles' most artistically significant work came only after they stopped touring and entered the recording studio full time. But the point is that they only circumvented the trap of mimicking their records by giving up on live performances altogether. In their case, the need to make records didn't simply alter their performances but put a stop to them. The biggest musical act in the world effectively conceded that recordings were now primary

and performances derivative and dispensable. But this strategy only worked for so long as eventually “they felt like prisoners of the studio” according to producer George Martin.¹³ Their famous rooftop concert was a prison break, as was the ultimate dissolution of the band.

Closer to the present—half a century after the 1948 recording ban—the fiercely independent Ani DiFranco included these lyrics in her song “Fuel”:

*People used to make records /
As in a record of an event /
The event of people playing music in a room*

If this was ever how and why “people used to make records,” it was for a very short window of time. As explained above, recordings are rarely simply records of “people playing music in a room”; far more often people in a room are trying to mimic what they heard on a record (even if they are the ones that made the record in the first place they are then compelled to mimic themselves).

Writing a full fifteen years before DiFranco’s song, Brian Eno explained how thoroughly disconnected records had become from performance:

*There’s been a break between the traditional idea of music...and what we now do on records...It’s now possible to make records that have music that was never performed or never could be performed and in fact doesn’t exist outside the record.*¹⁴

The record became primary, thus making both the musician and the performance derivative. The situation has been paradoxically summarized: “a disc recording is generally considered to be a live performance, while a live performance attempts to reproduce the recording.”¹⁵ Music critic David Hadju shares what I suspect is a widespread intuition:

*When I thought of pop songs as a young music fan...I thought of records. The music seemed inextricable from and even in some ways subordinate to the thing that contained it. A song I didn’t know of as a record—a chant from the kids on the playground, a tune my mother hummed while she cut pie pieces—seemed as if it were not really a real song.*¹⁶

While music has largely been an ephemeral experience, recording technology has provided the means to capture it and fix it in place. Yet, the fact that live performances remain extremely popular suggests that people still value the ephemeral experience and perhaps even the lack of control that necessarily comes with it. Indeed, there are whole genres and musical subcultures that have actively resisted the trend of pop music by maintaining the primacy of performance and shown little interest in recording and packaging their music.



Third, the very notion that music was even the kind of thing that could be consumed was itself a radical conceptual shift which brought significant consequences. The song that David Hadju's mother would hum while slicing pie didn't count as fully real, in part, because it existed outside of a commercial space. "It wasn't touchable, holdable—possessable," nor was it "sellable, buyable—consumable."¹⁷

Prior to the widespread availability of high-quality (technically, not necessarily artistically) recorded music, people primarily *experienced* music rather than bought music. In fact, people were initially more apt to buy sheet music to facilitate their own amateur performance rather than recordings from professionals.

But music scholar Tim Anderson reports that by the time of the second AFM recording ban in 1948, sales of sheet music were plummeting and sales of records were soaring. People were transitioning from actively making their own music to purchasing recordings:

listening habits surrounding popular music were changing from live

*amateur and professional performances to electronically rendered recordings of compositions which were typically allied with 'name talent'*¹⁸

The calculated move toward “name talent” should not be overlooked. It is the bolstering of celebrity culture where a small number of musicians are zealously promoted and extravagantly rewarded while the vast majority are ignored and impoverished. That small number of musicians could then be within the control of an even smaller number of record companies. Four companies controlled 75 percent of the record sales market in 1948 and “name talent” was essential to their economic dominance.¹⁹

This is not incidental but almost necessarily the case when music is distributed via a mass media.

*The increasing differentiation between performers and receptors can be understood as a mark of a high musical culture: thus the irrevocable gulf without the least possibility of mutual contact between performers and receptors is a consequence of presentation through the mass media*²⁰

The dominance of celebrity culture undercuts the frequently made point that recorded music allows for access and appreciation of a much wider variety of music than would otherwise be possible. The point is true as far as it goes, but as it turns out, it doesn't go that far. Almost all of recorded music is now simply a click away, but studies have found that when presented with such expansive access people's listening actually becomes narrower and less diverse.²¹ In 2013, the top one percent of musicians earned 77 percent of all recorded music income; digital services exacerbated this disparity rather than helped level it. This is partially explained by “consumers being overwhelmed by a Tyranny of Choice in which excessive choice actually hinders discovery.”²²

This is a particular example of a much broader phenomenon documented by Barry Schwartz in *The Paradox of Choice*—regarding how people respond when presented with an exceedingly large number of choices or options. In many cases it proves debilitating, people will often refuse to make any choice or accept whatever happens to be the default option even if it is not in their interests. Having more choice isn't necessarily empowering and isn't always better.

David Sax, author of *The Revenge of Analog*, relays his own first-

hand, experience of the paralysis resulting from the burden of too many musical choices in the now digital age:

*I frequently found myself opening the app, only to become paralyzed with indecision. My options were infinite, literally every single album and song ever recorded...It was as though the ease and convenience of digital music had sucked the very fun out of listening to it. The entire world of music was just a click away, but I couldn't even be bothered to do that.*²³

It is the same institutions that make services such as Spotify, Rdio, and iTunes possible that foster celebrity culture; this means that while listening to a wide range of music is technically possible people are still being pushed toward “name talent.” The technology was alleged to have a democratizing or leveling effect, but almost everyone is still listening to Taylor Swift and Beyonce. Again, there are, of course, those who have recognized the artistic cost of relying on distribution via the mass media and have essentially refused to participate. This is most evident in anti-establishment, anti-mass society music scenes such as anarchist punk rock.

Fourth, prior to recorded music, music happened largely in public spaces and was enjoyed in the company of others. It was almost inherently social. In contrast, the contemporary consumption of music is described by Tom Vanderbilt in his 2016 book *You May Also Like*. Vanderbilt writes: “Music is what people do on their own: in the car, with their headphones, via their playlists and customized stations.”²⁴

Music, arguably from its origin, has been capable of fostering community and even mending social relations, but is now, to a large extent, used to facilitate and maintain one's isolation. Making music together is a cooperative activity that has been used to resist social stratification. It was something that people did together and is now something to be consumed alone. We may all be listening to Taylor Swift and Beyonce, but we are largely doing so alone. Raising one's headphones is now a widely recognized symbol for cutting off a conversation. Where the technology has been successfully resisted, such as in many indigeous contexts and communities, music remains a bonding rather than an isolating force.

Finally, Petrillo often referred to recorded music as “dehumanized

music”, but it would be equally accurate to call it “disembodied music.” Musicologist John Blacking has said “music begins...as a stirring of the human body,” but when music was severed from performance it was also severed from the human body.²⁵ Music now seems to emerge from machines and devices rather than from people. Even when attributed to people it is often from celebrity figures who exist across an “*irrevocable gulf without the least possibility of mutual contact.*”

Perhaps more importantly, music has almost always been associated with dancing. But as music becomes something that is increasingly being consumed alone this changes. Just as people don’t often laugh out loud when alone, people don’t often dance when alone.

Mass Culture Requires Mass Media

Recording has always been a means of social control
-Jacques Attali

The AFM was a powerful union by the time of the 1940s recording bans. They had weathered the Depression years and even Prohibition which was a particular threat for a musicians’ union. The recording bans were an ambitious and controversial tactic but were carried out in the service of fairly modest goals and reforms. This is evident in some of the compromises that were offered by the union prior to the recording bans.

The union proposed that phonographs be produced for private, home use only and not available for use on radio. They proposed that if phonographs were to be used on radio that there be a limit to how many times a particular recording could be played before being discarded or otherwise destroyed. Despite legal challenges, they engaged in a practice known as “featherbedding” whereby an employer would be required to hire union musicians as standbys whenever non-union musicians were used or a recording was used. The union wanted its members to be given jobs as “platter turners”; that is, they wanted their members to be the ones to put the records on the turntables at the radio stations and receive pay in accordance with union wage scales; after all Petrillo explained: “we feel that if there is music on the record, that the man who puts the record on the machine should be a member of the musicians’ union.”²⁶

The goals were more employment opportunities and greater compensation; the same goals as almost any other mainstream labor

union. Despite the modesty of these goals. The bans were certainly perceived as a serious threat. Indeed, as a threat to national security.

The AFM recording ban was seen to be of such national significance that President Franklin Roosevelt attempted to intervene and broker an end to it albeit without success. Roosevelt considered the lack of recorded music a threat to national morale during World War II.

The Justice Department offered an even more extreme statement: "We regard a handicap on industrial progress by preventing the use of improved mechanical equipment in an industry as an attack upon industrial production."²⁷

An attack upon on industrial production! There's something worth paying one's union dues for if only it was the case. The hostile reaction was at least in part explained by the fact that media was in the process of becoming mass media and the recording bans were not conducive to that transition.

Private enterprise was hostile to the recording bans not only because using recordings was obviously far less expensive than continually hiring musicians but also because recordings allowed for greater flexibility when scheduling and distributing programming. With recordings came "the ability to propagate and move significant amounts of information across large portions of geography, both national and international, in smaller and smaller amounts of time."²⁸ In other words, they made mass media possible and practical.

The U.S. government was hostile to the recording bans in part because it was depending on the existence of mass media to effectively shape public opinion regarding the ongoing war:

*given that most American broadcasters needed musical recordings to retain their audiences and profit, a void of new musical recordings would endanger the ability of the Office of War Information to communicate to the nation about wartime goings-on.*²⁹

The stated virtues of recorded music—the promises of the technology—are the very values of modern, mass society.

*for the first time, music did not depend on the physical presence of performers in specific settings, or the simultaneous presence of an audience. Music was freed, so to speak, from the social context of its production.*³⁰

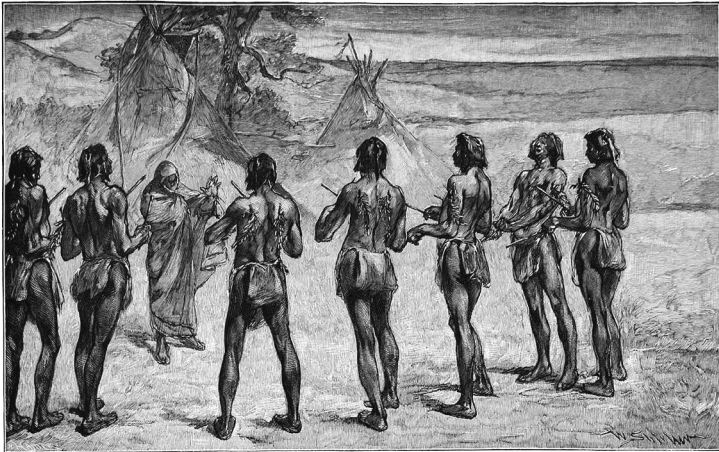
*Just as spatial restraints have been removed, so have temporal ones*³¹

Music is freed. Restraints are removed. This is the rhetoric and these are the promises that mask the harm of the technology.

Compare this with sociologist Wilhelm Weber's definition of mass musical culture:

*This is not just a matter of brute numbers of people buying music or going to concerts. What has characterized mass musical culture primarily has been the impersonality of relationships between listeners and performers and the active exploitation of a broad public by the music business.*³²

Mass society frees us from the inefficiency of personal relationships and of feeling connected to particular people and particular places. Mass musical culture frees music from constraints of time and place making everything available but nothing worth any effort. We used to dance and now we might tap our toes. Fringe and countercultural music scenes persist, in part, because they embrace rather than discard personal relationships. They eschew and deflate the purported virtues that the technology offers.



Conclusion: Music Without Recording

[M]any industrial societies have taken away from people much of the practice and pleasure of music making

-John Blacking (1973)

Recorded music is now ubiquitous and so it is quite difficult to imagine life without it. For consistent critics of technology to suggest that recorded music is less than a godsend—that it comes with a steep cost—may seem as strange as musicians refusing to make records. Even the phrase “recorded music” is somewhat awkward as it borders on redundancy for many of us; it calls attention to something so obvious that it very often escapes serious scrutiny. *Recorded* music? Is there any other kind?

But music predates the recording industry and will outlast the recording industry. Within the self-absorbed cocoon of civilization, such plain statements of fact often need to be said out loud. It is a banality that cannot be argued but nonetheless seems to possess a radical edge. Music has not always been a commodity, it's not always been recorded, and participation hasn't always been restricted to a narrow, special class of persons.

When the recording industry presents itself as the very source of where music itself originates it promulgates a dangerous and self-serving lie that diminishes our humanity for it tells us that we are less than what we are. In truth, “men [and women] are more remarkable than most societies ever allow them to be.”³³

Again, music predates the recording industry and not to insignificant extent. The earliest known instruments date back 36,000 years. These were flutes found in a cave in southern Germany; they were crafted from the hollow wing bones of large birds. In the Pyrenees, pipes crafted from bird bones have been found that are nearly just as old. These would have relied on the insertion of a reed and were carefully crafted with finger holes placed in depressions to ensure a full seal when fingers were applied to the instrument. Furthermore, it is widely assumed—and stands to reason—that music made with the human body and found objects significantly predates the deliberate creation of actual instruments such as bone flutes and pipes.³⁴

*So whereas we now visit painted caves in a hushed reverence, they probably once reverberated with the sounds of pipes, stalagmite xylophones, singing and dancing.*³⁵

In communities that existed prior to or apart from recording technologies, attitudes toward music were often drastically different from our own.

Steven Mithen writes:

*The appreciation of music is a universal feature of humankind; music-making is found in all societies and it is normal for everyone to participate in some manner; the modern-day West is quite unusual in having significant numbers of people who do not actively participate and may even claim to be unmusical.*³⁶

In contrast, John Blacking reports that the Venda people believe “all normal human beings are capable of musical performance.”³⁷ It’s a sentiment that would likely be echoed by many punk rock musicians and folk singers who can still see music and something larger and more fundamental than what appears in pop music charts.

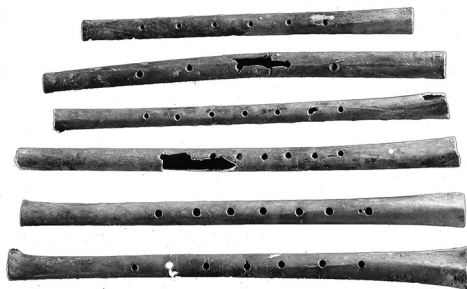
The consequences of recorded music go beyond the ability to amass a highly-tailored and extensive playlist or maintain a vast record collection. In evaluating the technology, one must consider music as an industry and not merely an art form, the development and propagation of celebrity culture, mass media and mass communication writ large, and the passive role that most of us were assigned when music became a commodity.

Recorded music is a palliative for one of the many mutilations inflicted on us by civilization. Like any palliative, the fact that we make use of it shouldn’t blind us to the original injury that has made it necessary. Soon, we’ll need to kick the habit.

Endnotes

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- 29 *Ibid.*, p. 238.
- 30 Martin, p. 20.
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From early domestication in England, agriculture was carried on under the open-field arrangement. The land was a shared resource in the communal control of small-scale pastoral farmers. A world in which villagers lived their own lives and cultivated the soil independently; originally for subsistence, not for market. Self-governing village communities, from the late Middle ages up to about 1800, in which “neither county justices nor central government” interfered with daily life.¹

English peasants possessed an intimate and necessary knowledge of their environment, and in their autonomy could be said to be at least semi-free. Folk traditions and customary rights were the foundations of this status. But over the course of four centuries, the ways of independence and mutuality were attacked and fatally undermined. Anti-communal forces rose up against the commons and its commoners. In Gilbert Slater’s words, “The central fact in the history of any English village since the Middle Ages, is expressed in the word ‘enclosure.’”²

The process of privatizing communally-held land began slowly, rather inconspicuously, in the 1400s. In this sense the enclosure movement resembles the onset of division of labor or specialization, which at times, especially in its early stages, is steady but gradual. Enclosures went largely unrecorded, although it is also true that there were many important and dramatic instances of resistance.

“The fabric of society was being disrupted,” according to Karl Polanyi, and although the very worst instances of enclosure “happened only in patches, the black spots threatened to melt into a uniform catastrophe.”³ And no common was ever brought back, just as factories

weren't forced to disappear. The loss of communal rights was a profound degradation. Marx famously traced the origins of Britain's urban proletariat to farmers forced off the land by enclosure.⁴ This was a major advance in the domestication of humans. Those who managed to remain in agriculture became far poorer, as rents and prices rose steadily. The government's General Report of 1808, for example, contained nearly unanimous complaints from poor people who had lost their cows and could no longer provide milk for their children.⁵ To be able to keep a cow was literally a measure of a family's ability to keep starvation at bay.

Enclosure made a few people rich at the expense of the very many. "Civilisation, in this and other guises, was rapidly painting the green spaces black."⁶ Which brings to mind the toll on the rest of life. Deforestation had eliminated about 95 percent of original English woodlands by 1700; it was left to enclosure to privatize and destroy the last four million acres.⁷ Kirkpatrick Sale adds that "It is almost never reckoned what the cost to the nonhuman species of the sweeping enclosure movement must have been."⁸

Along with the goals of property, profits, and production, another pro-enclosure motive was the need to impose social discipline. People with a strong measure of independence and self-sufficiency can be difficult to oppress or exploit. Like the hand-loom weavers, yeoman smallholders were seen as dangerous and undisciplined. By the late 1600s, polemicists promoted enclosure, denouncing the commons as "seminaries of a lazy, thieving sort of people."⁹ In his *Report on Shropshire* (1784), a Mr. Bishton clearly stated a basic goal of enclosure: "that subordination of the lower ranks of society which in the present time is so much wanted, would be thereby considerably secured."¹⁰ Matthew Johnson's *An Archaeology of Capitalism* (1996) discusses a larger context of the ideology of order and control, cultural efforts toward "closure" drive, manifested in areas such as domestic architecture and church liturgy.¹¹ Alexander Pope's favored Palladian architecture, and classical garden design come to mind: the village common as an enclosed, landscaped park.

Government involvement proved decisive, in the form of parliamentary enclosure awards beginning in the mid-18th century. "Seven million acres were covered by parliamentary awards between 1760 and 1815."¹² Enclosure acts by the State, authored by big landowners, marked a turning point in class robbery. The abolition of the old communal organization of agriculture was greatly accelerated, and the extinction of village community was at stake. More and more,

the result was fewer, larger-scale capitalist farms, a shrinking number of semi-independent “cottagers,” and a growing host of dependent, landless laborers.

Enclosure and usury had been stigmatized before the early 16th century; attitudes were shifting toward both land consolidation and capitalist gains. The logic of early capitalist rationality was delayed by deep-rooted customary institutions, restraints on production and productivity. But Jean Calvin, among others, assisted a sea change in Europe’s economic culture.

The very meaning of property was in question. Heretofore, landlords ruled, but did not own the land. In the course of the 17th century, clarification and assertion of ownership meant an increasingly absolute definition of property. The countryside became mere property, with the creation of consolidated, individually managed farms. The notion of absolute property in land, subduing the earth at a new level of control, also required subduing the poor.

There were contrary voices raised against these new developments. J. Howlett of Great Dunmow in Essex opposed enclosure fundamentally in 1808: “Let us no longer boast of our improvements, but let us return to our primitive barbarity, and let our flocks and herds resume the undisturbed possession of the forests.”¹³ In the early 1800s, the poet John Clare wrote about what was being lost, as the whole process came to a head:

*Unbounded freedom rules the wandering scene
Nor fence of ownership crept in between
To hide the prospect from the gazing eye
Its only bondage was the circling sky.*¹⁴

Indeed, dissenters were present all along. Thomas More’s *Utopia* (1515-16) contained a bitter indictment of enclosure’s toll, at a time when plow land yielded largely to sheep pasture. Wool was the breeding ground of English capitalism.

Poets, commentators, and utopians were not significant factors in the struggle over enclosure. The very long contest has been mostly unreported, in part because most resistance to enclosures was by mainly illiterate peasant-artisans. The standard general histories pay little attention to this movement, and chiefly side with the victors. “Discontent was probably exaggerated,” declared Christopher Trent, in *The Changing Face of England*.¹⁵

Turning to a brief survey of the specifics of resistance, the War of

the Roses (1455-85) signaled the end of feudalism, a century ahead of the continent. It also coincided with the opening rounds of a very long war over enclosures: “riotous resistance” occurred in 1469, 1473, 1495, and 1509.¹⁶ 1500 is the conventional date for the inauguration of the “Age of Discovery” (pre-colonialist imperialism); it also marks the age of English enclosures. By the mid-1500s, rancor and violence came to accompany the latter; resistance burst forth.¹⁷ The revolts of 1548-52 (e.g. Kett’s rising in Norfolk) centered in eastern and southern England, and were anti-aristocratic as well as anti-enclosure. Kett was an older tanner of Wynmondham, Norfolk, and the rebellion in the summer of 1549 that bears his name not only involved the destruction of ditches and other enclosure barriers, but “shook the foundations of Tudor England,” in the words of Barrett Beer.¹⁸ Several Tudor rulers, including Henry VIII, were actually opposed to enclosure out of fear of serious unrest by a starving peasantry. In fact, enclosures were being prosecuted in the Star Chamber (England’s highest court) as late as 1639, even though government opposition was certainly waning. The very first enclosure by parliamentary act or award had taken place in 1604.

The Midland Revolt of 1607 was a coordinated, armed peasant revolt that spread across Midland counties. A major obstacle to suppressing the uprising lay in the fact that the local militias were unreliable, consisting mainly of plowmen. The revolt was put down and enclosures continued, but so did opposition, e.g. almost continuous riots at Coventry for years to come.

Along with insurrectionary actions, other forms of resistance appeared over the centuries. Organized raids into privatized reserves such as Windsor Forest, Enfield Chase, and Woomer Forest provided game for dispossessed families. Various styles of poaching reflected an underlying refusal to accept the seizure of communal lands. Smugglers were admired and “hardly anyone considered it morally wrong to cheat the Government of taxes.”¹⁹ Refusal to pay rents was also a popular phenomenon.

The drive to drain fens or wetlands accompanied enclosure efforts and was met with similar resistance. There were “fierce conflicts” to defend such places throughout the 1600s. At Deeping Fen, for example, about a thousand men destroyed drainage works in 1699.²⁰

The century may not have been entirely conflictual, and yet it seems that not a single year was without outbreaks of struggle. Thus it was not out of the ordinary that in 1607 Diggers and Levellers made their first challenge, for which their leader was hanged. They are re-

membered more for their 1649 project of de-enclosing land near Walton-on Thames in Surrey. There Gerrard Winstanley and 50 others held out for over a year in defiance of landlords, Army, and the law. They stood for the abolition of enclosures and of private property itself.

A turning point could already be glimpsed, culminating in the so-called Glorious Revolution of 1688, very far from being either glorious or a revolution. At this time England was in the main a country of commons and of common fields,²¹ but 1688 not only greatly strengthened parliamentary government, but also bolstered authority across the board. Whereas earlier enclosures did at least provide some allotments for the poor, or other concessions, this relative leniency was henceforth withdrawn.

Not coincidentally, a move to establish workhouses set in, greatly aided by a parliamentary act in 1722. The East Anglian riots of 1765, among others, opposed the spread of such prisons for the poor. Other privatizing methods included turnpikes and tollgates, which “aroused intense popular opposition.”²² There were riots against turnpikes around Hereford and Worcester in 1727, 1735-36, and 1753, and much destruction of them at times in Bristol, Leeds, Wakefield, and Beeton. Significant anti-enclosure violence continued, including Northamptonshire 1710, Weldon 1724, Forest of Dean 1735, Charnwood Forest 1749, South Fields 1753, Wiltshire and Norwich 1758, and Oxfordshire 1765, to name just a few.

The growing power of a more activist State turned the tide: parliamentary enclosure acts increased strongly from about 1760. At this time it was no longer deemed necessary for enclosure petitioners to remain quiet about it, and after the 1780s, little more is heard of the case for open-field agriculture and the maintenance of commons.²³ One exception is “Remarks on Enclosure” by “a country farmer” who in 1786, proclaims enclosure a swindle perpetrated against poor folks.²⁴ The pace of government-enforced enclosure picked up steam and reached its peak in the years between 1793 and 1815.

The extensive--and largely untreated--anti-enclosure riots throughout East Anglia in 1816 show that the struggle was not yet over. The insurgents inscribed “Bread or Blood” on their flag; this is the title of A.J. Peacock’s exceptional work on the subject.²⁵ The serious “Swing” riots of 1830 took place all over agrarian England, especially in the south and east. A principal weapon was arson, aimed at those spearheading enclosure and mechanization. Over 2000 were imprisoned for the widespread property destruction. 1831 saw open warfare

over the fate of the Forest of Dean, with many fences destroyed by hundreds in several Gloucestershire towns.²⁶ Otmoor, Oxfordshire was the scene of bitter anti-enclosure fighting between 1830 and 1835.

And yet, although powerful, these actions were rear-guard, last-gasp. It is hard to disagree with Michael Reed's assessment that "by the third decade of the nineteenth century the redrawing of the rural landscape embodied in the phrase 'the Parliamentary enclosure movement' was almost complete."²⁷

The last major enclosure act was passed in 1845, and the last big riot occurred at Coventry. "Inclosure," as one man told Arthur Young in 1804, during the Napoleonic wars, "was worse than ten wars,"²⁸ which is why some held out so long and so tenaciously for the old customary economy. Revolt flickered for years (e.g. Berkhamstead and Epping Forest, 1871), but enclosure had triumphed. As factory slavery developed, resistance to mechanization (e.g. the Luddite risings, 1800-1820) replaced efforts for the land to be returned. Craft work gave way to mass production, along with the compulsory enclosure of all land held in common by the people. The self-supporting cottager who obtained most goods by his own handiwork became a consumer of products in a mass market. The small forms of the old orientation were "turned into factories for bread and meat."²⁹

The "primitive" institution of the common was lost. The ardent desire of William Hewitt in 1844, to "chase all commissioners, land-surveyors, petitioning lawyers, and every species of fencer and divider out of their boundaries for ever and ever"³⁰ could not be fulfilled. Those enclosed were, of course, non-indigenous; they toiled within already long-domesticated Europe. But the words of Comanche leader Ten Bears seem somehow relevant: "I was born where there are no enclosures and where everything drew free breath. I want to die there. and not within walls."³¹

Endnotes

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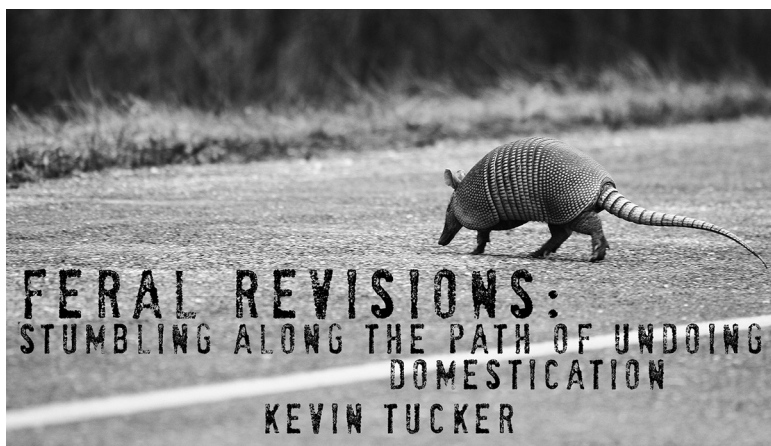
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Armadillo. Photo by Yank.

Perhaps the time has come to dispose of the notion of wilderness as a zoo, an exalted aesthetic, a captive, exotic landscape, or a storehouse of tomorrow's resources. Wildness is the state against which we assess the "virtues" of civilization and its correlates—mass society, the use of fossil fuels, growth-oriented economics, and the technologies of disjunction and pseudomastery that temporarily conceal our limitations and lead us to play in a world of virtual reality rather than live in actual places.

*- Paul Shepard, *Traces of an Omnivore*.¹*

You learn a lot about an animal when butchering it.

You also learn a lot about yourself.

Immediately upon removing its skin, you'll be able to see how it died. That is if it wasn't already apparent. Most of the animals that I have butchered were killed by cars, ambivalent drivers often not wanting to stop unless it's to curse the dead or dying animal for the audacity of "hitting them." On multiple occasions, I witnessed or seemingly just barely missed the actual collision. I've moved dying animals off the road and sat with them while they passed. I've scared off on-lookers who brought morbid curiosity instead of empathy.

I've seen fawns watch their mother die from a distance, unable to do anything to change the outcome. The damage was done at the advent of combustible engine, amplified with the mass production of automobiles, and the fate sealed when the road was cut and paved.

I have felt guilt, sharing those last moments and feeling nothing but rage. It's greatly different than the feeling of the hunt. There's

a moment during the taking of another being's life when you have passed the point of no return. You and that animal are both in it. There's chase, but there's no mystery. It's a process that is impossible to put into words.

Arguably, that's the way it should be.

In the case of auto-collisions, all of that is gone. There's nothing sacred. Nothing shared. No reverence, no respect. There's no magical ability to communicate my anger over uncaring machine operators in the eyes of a dying deer. Or a raccoon. Or an opossum. The relationship of predator and prey is buried within all of us. It is a part of our wildness, a lurking awareness of what may or may not come. An ability to remain prepared that doesn't require being afraid. The car is a machine. It is a technology of civilization. It is not a living being, it possesses no thoughts. Animals might become aware of its patterns, but its behavior is not predictable: it is driven and the driver's whims control it.

As the life fades to a fog in a dying animal's pupils, there's neither time nor place for explanation.

The predator-prey relationship that the driver might possess is lost to the ambiguity of their weaponry. Before you start removing skin, those wounds are most apparent: our own disconnect. I've lent a hand to many former vegans ready to eat meat again. In so far as it was possible, I found the act of butchering road kill to be a good entry point. This is an intimate experience with another species, a sacred and instinctive part of our being, yet we are absent from the kill.

The reminder of that fact is seeing the impact a car has on a living being. Bruising can begin immediately. Internal bleeding can be endemic. The sheer impact can be enough to end it all. Depending on the surroundings and constraints (often a matter of legality), you can also quickly assess which parts of the body not to remove, to leave for other scavengers. Were organs ruptured? Even without a guide, and certainly without the internet, your nose and eyes are pretty simple tools for assessing the damage. They work well for a reason.

Beyond that, you can start to piece together the life this animal has lived. Or, moments before, was living. Lactating nipples. Pregnant bellies. The tiny antlers that are beginning to sprout on the head of a young buck. You can find old wounds that have healed over. You can find the scars that led to the wisdom of the elders. The contents of the stomach, the state of the liver and lungs; all of this can tell you about the life this animal had, about the niche it had carved out around our world. If it had been raiding cornfields or foraging in suburban back

yards.

Sitting on the side of the road, instantly tossed into this circumstance, perhaps with a headlamp and trash bags or bins for separating edible meat from usable parts, you can piece together aspects of your own life.

If you allow it, road kill can humble the loftiest of ambitions and philosophical pretexts. When you allow the blade to move instinctively through connective tissues, when you begin to let go of preconceived ideas and just step into the moment: then you can really start to learn.

In the end, you'll still be a bloody mess, but it's at least one you can start to understand a bit more intuitively.

Allow me to step back a bit. A little before the road kill at least.

My own forays into rewilding started the same way as most people that I know: hilariously.

To be more specific: in the military surplus store.

Survival is an ingrained default within civilization. As any good wage slave can tell you, when you live paycheck-by-paycheck, sooner or later you get the feeling that you might just be taking part in the most unfulfilling hunt. Developing sellable and marketable skills or simply renting your body as labor, survival isn't a philosophical reality; you do what you do to eat today, tomorrow, or the next week.

Armed with an upbringing in a technological society, it's easy to start with the tools. Books, weapons, a bevy of cutlery and packable tools, laughably indestructible gear that renders all feeling and senses useless: all that *stuff*. The trolls who reside on the internet will tell you that rewilding is for overcommitted Cub Scouts. To be fair, sometimes the first go can look that way, but, growing pains, right? Even with a laundry list of self-appointed merit badges, it becomes increasingly apparent that *survival* and *living wild* are most definitely *not* the same thing.

Outfitted on a budget, but technologically enabled. The horribly dressed offender is ready for the checklist. Mine was great. A veritable five year plan. A book nerd since childhood, memorization of field guides was the bedrock. The manuals were to be tackled "in the field." "Dirt time," if you wanted to sound seasoned. Food, shelter, water. Then expand upon techniques related to all three.

Prior to YouTube, the hope to tackle "primitive skills" using manuals (often at that time, military manuals), led to some laughable situations. I have photographic evidence of hand drill length spindles be-

ing used for a bow drill. You live and learn. You adapt and adopt. You compare notes with friends and horribly mispronounce plant names. Then you wisen up and start to work on it together. The pieces start to come together. Slowly.

And then things start to make sense. Not in a philosophical way, but in an innate way.

Rewilding—like its arch-nemesis, domestication—is a process. You can't checklist your way through it. There's no award ceremony, no merit badges: it simply is what it is. It is about shedding baggage. It is about removing the narratives of the civilizers from your mind; the voices that tell you have to buy food or clothes or flashlights and knives with compasses in the handle to survive.

From the dawn of human settlements, the moral of the story is this: you can't do it without *Us*. Without the tribe, the nation, the state: the artificial community of co-dependents, stunted in our own personal development from harnessing the skills of self-sufficiency and becoming people we want to build community with rather than those we have to by proximity. The underpinning of domestication is to take each of us, all born mentally, physically, and psychologically to be a nomadic hunter-gatherer and turn us into workers, consumers: pieces of the social and technological machinery.

Simply put, we are worth nothing if we aren't broken, tame.

Captive.

Being broken is a hard pill to swallow. So we have to take it piece-meal. We need to be constantly reminded of our condition. To be told that our value comes from god, capital, or the greater good. It keeps us buying, it keeps us working, and it sends kids to school and hands out hall passes to take a piss. It keeps us gorging on calories without sustenance. It keeps us online. It keeps us from feeling the soil beneath our feet. It makes it possible for us to look at the forest and just see the trees.

It is one thing to understand philosophically, historically, ecologically, and socially that this process is on-going, that it is our history and our present, our narrative and our manifested destiny. It is easy to feel rage and anger. It is relatively easy to start seeing the cracks in the myths, the infrastructure and the concrete.

It is another thing to feel them.

The hatred comes quickly. Early on it became a want to escape, to find refuge. My partner and I tried to go further and further into the forest. Further from the hum of machines and the conveniences of electricity. And the further we went, the louder the ambiance became.

The rumble of a distant highway, once acknowledged, is nerve wracking. There was no asylum here. Other species had learned to cope with the spatial limitations and make the most of it. It was one thing to observe them, but when seen as victims, it's hard to appreciate what they still have.

And that makes it impossible to see what we still have.

The problem here, from the viewpoint of the domesticator, is that we're still human. We are trained to silence empathy, to turn it into a narcissistic apathy. Those feelings are suppressed, but they don't die. Yet the consequence of trying to suppress them is that we break.

And we can break irreparably.

Having lost our communities, removed from a real-world social network of people that know you in your day-to-day life, suffering in silence, raised in disdain or disinterest, and processed by bureaucracy and smiling day-time television proselytizing, we turn inwards. Indulgent in our depression or overcompensating through social domination, we inherit patterns of avoidance befitting hierarchical society. That is a place without trust, but a plentitude of self-serving deception.

Rewilding is a process because if it isn't, then we just break. Completely.

That the mind paces understanding and partitions revelations is a self-defense mechanism. Evolutionarily speaking, we weren't equipped to cause change capable of expanding beyond our own proverbial vision and reach. More to the point, we didn't evolve for inter-continental ballistic missiles, sweat shops, and instant communication with other humans on the other side of the planet. So when the process of unraveling the virtues of domestication means immediately feeling accountable for the global cost of our own complicity, if your brain isn't pumping the brakes, it might not come back.

It is ironic that attuning your senses and awareness to the world we were born a part of can be so jarring, but there's also a reason why the domestication process works. It's a totality and it always has been. It redirects our needs and impulses, diverts them through the social machinery. We can learn a lot from books, from history, for social and ecological understanding, but what we're after here is shifting perceptions.

I'm speaking specifically here of what I have been calling *radical humility*.

That is the experience being humbled by the wild. Often by real-

izing how dumb the things you were doing or thinking really were.
And, more importantly, moving past them.

Experiments and Experiences

There are some aspects of life that thought cannot understand. Thought works by compartmentalizing, creating boundaries—dividing the whole into parts. In order to fully comprehend the meaning before us, we have to go beyond thought.

- Paul Rezendes, *The Wild Within*²

We have been trained, programmed, to see the world in pieces.

We focus on the details so much that we can miss the big picture. We can overcomplicate the minutiae and underestimate the will, knowledge and abilities of the world around us. Having arisen from the Dark Ages with the colonizing and world destroying abilities of the Enlightenment, we became enmeshed with our concepts of truth and crowned our methods of scientific observation king in the land of the blind automatons. We take away from the world wholesale and when we give pieces back, it's endemically slow.

The point of rewilding is not to adapt our acquired methodology and to survive. It is to find, for the sake of sounding like an infomercial guru, the wild within and around us. To break down those barriers that we had installed around us to emphasize our own uniqueness and specialness. Try as we might to wax elegantly upon it, the point is to realize how absolutely stupid some of our preexisting thoughts, perceptions, and approaches truly are.

Fortunately, we have a good and, seemingly, forgiving teacher: an exceptionally resilient world.

The problem is that we learn really, really slowly.

For biologist Carl Safina, the underlying principle of “human progress” is “an expanding circle of compassion.”³ As much respect as I have for him, I think there are times when he too does a double take on those words. “Human progress,” or capital-P Progress as we’ve come to uphold it, is anything but expanding compassion. If anything, and this is being gracious, there’s a trickle of regaining information and understanding that pastoralists and farmers buried alongside the bodies of nomadic hunter-gatherers. And it is a selective trickle at that.

It can be painful to read about what is becoming more widely accepted amongst scientists about animal cognition at times. Biol-

ogist Frans DeWaal has led the call for a deeper understanding of empathy with other species, but then goes to work at Yerkes Primate Facility every day.⁴ How empathic we can be about primate emotions while injecting them with opiates to understand human addictions shouldn't have to be up for debate.

I'm absolutely grateful for folks like Safina, psychologist G.A. Bradshaw, and others, even DeWaal to degrees, but the upheaval in non-human cognition is old news, not new. We've been trained by the machinists of our epoch to disregard them. Rene Descartes, considered the father of Western philosophy, used the phrase *cogito ergo sum*, "I think, therefore I am," to justify things like public vivisection of dogs without anesthesia. A true psychopath, the dissections were meant to explore our similarities in terms of organs while boasting that their inability to "speak" was because they have "no thoughts."⁵

Yelping, whining, and cowering: apparently all mechanical functions to a philosopher. Nothing to see here.

Try as we might to discount the archaic nature of Descartes, the vivisectors at Yerkes might convince themselves that the use of anesthesia makes a world of difference, but it does not. While a progressive veneer of care exists, we've merely industrialized and modernized our brutality. In spreadsheets, no one can hear them scream.

If anything, we've incorporated more cognitive dissonance than most in Descartes' time. The scientific world is still barely coming to terms with the idea that ants organize based on cooperation and are largely self-managed, that the queen holds no authority, and that ant lives are less regimented than factory workers.⁶ Even Charles Darwin and his anarchist counter-part, Peter Kropotkin, granted that ants had wants and emotions.⁷ Nomadic hunter-gatherers could tell you far more than that.

In all regards, our much-reasoned baggage is clearly detrimental towards embracing what it means to be an animal.

That much is clear.

What is less clear is how much this worldview really gets in the way of our experiences with the world. Lacking a life of integration and context, we're left to figure things out. And in an eerily insecure way, that's almost reassuring. When we figure something out or learn some new factoid, we get a little boost of endorphins in our brains. We think it's a discovery. Like most discoveries, we're really just the idiots who had to figure the obvious thing out.

We approach the world as we are conditioned to: as individuals. Each of us imbued with a sense of uniqueness. From a rewilding

perspective, that sounds like isolation. From a civilized perspective, it's supposed to be the sales pitch. And that's one thing that makes civilized humans truly unique: finding value in captive lives.

In reality, things are much more complex.

I tend to speak of "the wild" or "wildness," but if there is anything either of those terms stands for, an entity they most definitely are not.⁸ "Wild" is no a stand in for god or any other contrived, omniscient hierarchy. It's just a term. The reality is that all life is connected. Carl Safina sums it up well here:

A living thing is a knot of passing time, flowing material, and continuous energy. From dust, air, and water, energy assembles itself into the wood, leaves, bone, and muscle that we recognize as living. All lives depend on how energy pushes matter through plants and animals. Often the matter, like carbon, nitrogen, and water, cycles from one living thing to the next through the whole community. We are these dynamic processes in relationship to one another. We are a relationship to the world.

To the point: "you are not just an entity; you are an *interchange*."⁹

Philosophically speaking, that probably works fine on face value. But we aren't speaking philosophically. On a biological timeline, we're speaking in terms of fact. We, however, live in historic time. So getting this through your head isn't really a cognitive issue, it's a pragmatic one. Living in cities, communicating with the world through screens: we just don't engage our senses. At least not without contrived circumstances; manufactured scents, taste-panel approved food products, and as consumers of music instead of a part of the harmony, these simply reinforce our roles as consumers of products and spectators of the artifacts our unique Self acquires and identifies with.

Those first years of taking field guides out studiously, they just perpetuated this kind of consumptive, scientific minefield. If you reduce the variables and follow the rules, you will find what you are looking for. Or you find something and reduce variables until you identify it.

And I should clarify, it can be an ugly process from that biological timeline—we didn't survive the ice ages as a species because of books—but it's one we're stuck with since our elders were workers and specialists instead of hunters and gatherers. My point is, whatever gets us out there is just a starting point. It's the first steps you take, not the

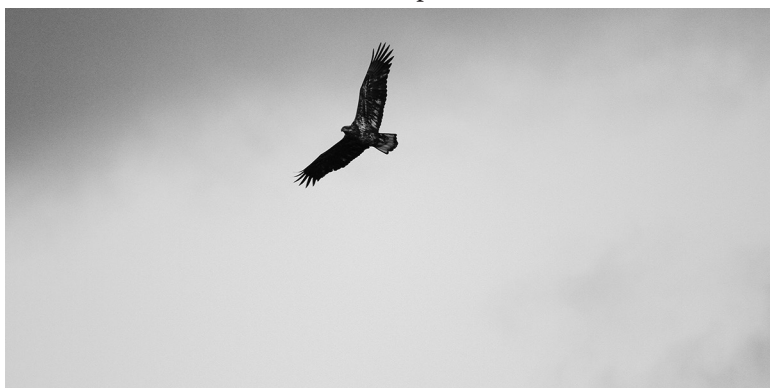
last. If you look beyond the page and the stats, you find the limitations of your unique sack of flesh don't have such a clean end point.

In hunting edible mushrooms, I've often found that despite a lot of bright colors, sight alone isn't enough. A lot of mushrooms have very specific scents. Like the peppery smell of the chanterelle, some are great. Others are less pronounced in smell, but more in soil or wood preferences: get to know them and you can feel if the soil is too dry or too wet. Some get you on your hands and knees. I've been in spots where I've found hundreds and thousands of morels, each one a varying degree of illusive. Ever the excellent guide to the world of wildness, I've also found enough morels under pines to give respect to the ultimate in anarchistic fungi.

Sometimes you just have to more literally look past the book.

As the fruiting body of a network of mycelium, the communicative body networking trees and cycling nutrients from disturbed soils: the mushroom is perhaps the greatest challenge to the notion of a unique Self. I can hold the fruiting body in my own hand, but what that mushroom "is" extends nearly infinitely beyond that. Spores fall from the cap and propagate. Vast underground networks separate and reconnect. They spread through rotted flesh in trees, redistributing nutrients, feeding off its expanding reach. Cordyceps parasitize insects as they forage and hunt, their bodies becoming the soil from which the next fruiting bodies will grow.

Dear machinist, where doth the parasite end?



Immature Bald Eagle. Photo by Yank.

Hearing discussion about the "web of life" or the flow of energy, it can sound downright hokey. Every time you use those phrases, another hippie probably joins a drum circle. But at a certain point, you run out

of terms. More importantly, the terms run out of context.

Ecologist Paul Shepard was equally familiar with this problem:

*The difficulty is that it is practically impossible to discuss our experience of the nonhuman without recourse to a jargon that is the property of an outmoded and destructive enterprise.*¹⁰

To be completely reductionist, reality is far more complex than language. Meaning comes from context. And context comes from grounding. Hell, even trying to discuss the “web of life” requires a web of its own!

Am I not being courteous by looking at mushrooms? Fair enough. In the words of master tracker Paul Rezendes, “In order to embrace the web of life yourself, try tracking an animal.”¹¹

Even more specifically, go track a fox.

Fox tend to be rightfully skeptical of humans. They’ve earned the reputation of being tricky not because they’re conniving, but because they’re smart. Their tracks are notoriously deceptive. It’s always great to head out in the snow to track fox, sometimes spending hours on a set of tracks to wind up back where you started without ever seeing more than a few signs that the fox actually accompanied the mysterious tracks.

If you’re lucky, you’ll find signs of a pounce. The snow keeping the shape of a furry snout, a few stray hairs left to remind you it was really there. Once again, you find yourself crawling on hands and knees under brush. Walking in tracks so intently laid, it’s hard not to gain some perspective. “Stalking,” Rezendes reiterates:

*gives us an opportunity to move away from the tiny perspective of thought and self in an all-encompassing awareness. When we are in this awareness we see with the eyes of the whole universe. The tiny perspective of self is put in its place, seen for what it is. It is no longer a frightened little identity hiding in a vast wilderness.*¹²

Not to go too far off the deep end, we do exist as individuals. We make decisions. We have impacts. Feeling like the barrier can break down between predator and prey, forager and flora, doesn’t mean that we cease to exist. What it means is that I, or whatever I call myself, is the sum of my relationships, experiences, and interactions. I am the sum of the energy that sustains my mind and body.

Much like the fruiting body of mycelium, I cannot live without

all of that. Bringing it back to Safina, “Connections make us individuals.”¹³ And to allow Shepard to take that a step further:

*Self-consciousness is possible only in a world of Others. We are members of a human family and society, but the presence of animal Others enlarges our perception of the self beyond the city to the limits of the world, and deeply inward to that ground of being where live the lizard and monkey and fish.*¹⁴

The problem isn’t that civilization created self-consciousness, or even the concept of “I,” it’s just that it defines it in isolation. Domestication seeks to offer the captive a sense of meaning and accomplishment. A pat on the back for what “you” have done with no recognition for what got you there. Ever the prophet of the Ego, Max Stirner typifies that groundless celebration of the Self:

*My intercourse with the world, what does it aim at? I want to have the enjoyment of it, therefore it must be my property, and therefore I want to win it. I do not want the liberty of men, nor their equality; I want only my power over them. I want to make them my property, material for enjoyment.*¹⁵

Spoiler alert: Stirner died at age 50 after being appropriately “stung by a winged insect.”

And that feeds into this cycle, all of this baggage that we carry with us. Notions we consider so logical and such a baseline for our interactions that they take active work to realize how untenable they really are. We uphold uniqueness against all of the adaptive and resilient pieces of our minds that formed over millions of years of evolution.

Fortunately, it’s not a permanent state. That doesn’t make moving beyond it easy. Realistically, it’ll be a matter of generations who know to listen and trust in the connections of all other beings, be it red fox, voles, grasses, or mycelium, are living too.

And that’s not something they have to philosophize about.

What a Forest Knows

Killer whales simply seem to specialize in acute consciousness. They don’t appear to be astonished by us; they take us matter-of-factly. We don’t need to continue being astonished at their behavior. Instead, we might simply fully accept them—and be astonished by

one thing about ourselves: how long it's taken us.

- Carl Safina, *Beyond Words*¹⁶

I have a deep love for turkey vultures.

All animals have personalities. Plants and trees certainly seem to as well. But I've seen turkey vultures that really seemed to have a sense of humor. I see them often, huddling alongside a freshly cut hay field, as if to discuss what they've found left in the tractor's wake. But there are times when you watch them soaring upwards in a wind tunnel, times when they look more relaxed than others. I can't help but think that it looks like fun.

And why wouldn't it be?

Walking is a form of transportation, a method of movement. We use it to hunt, forage, play; we make it a little weirder and call it dancing. That's how we get around. And yet there are times where it's fun. Or, at the very least, soothing. As it should be, nomadism is in our bones. Literally.

We take in the world on two legs, vultures on two wings. You have days where cross winds look like they could take a vulture out of the sky. And there are days when you've got a bruised heel or sore leg and walking can end up being downright painful. That's hardly most of the time.

That I have to wonder if turkey vultures enjoy flying comes back to the point here: this is how far we've gone, that we have to prove that animals feel joy. That they communicate. That they understand each other and that their world doesn't resemble ours: a mechanically operated world of semi-autonomous automatons. The ol' struggle to survive bit.

Mobula rays, a cousin of the Mantis ray, leap as much as ten feet out of the ocean while gathered in the thousands. For weighing upwards of a ton and having a seventeen-foot wingspan, that's quite the feat. There is speculation about the benefits of it; courtship and parasite removal among them, but they also certainly seem to enjoy it.¹⁷

This hits at the core of scientific functionalism: if a biological purpose is discovered, that overrides any emotion, feeling, or personal reaction that any Mobula ray, turkey vulture, or human being might actually feel. We become obsessed with explaining the world instead of just accepting that functionality isn't the sole driver for personal behavior.

That kind of economic-biological theorizing is the kind of burden you shoulder when you're the descendent of agrarian and indus-

trial workers. It's all work or play. And there's no reason to believe this is how it must be outside of the drudgery of production. Be it a feudal field, a factory, or a desk job, we're the living anomaly. We have the baggage to overcome. The real world, that web of life, it doesn't come in pieces like that.

Sounds like a simple realization, until you catch yourself trying to solve the things you observe instead of just accept that they likely just are what they are. I find myself doing that constantly. The situations that we've created because of civilization require that kind of problem solving approach. There's a degree of maliciousness and deceit that we just accept, but on a social level, that doesn't exist anywhere else in life.

Of course animals act with intention.

Most of us prey upon others, but outside of play and occasionally sneaking an extra piece of fruit here and there, intents are obvious. We set ourselves up for failure here because we live on such a scale and use technology to impact so much life that we have a physical distance to match our social and psychological ones. We over-rely on language, spoken or written, to convey everything. We pride ourselves on it. We act like developing this one form of interaction over the others grants us some ingenuity; really all it does it make it possible to lie and be lied to easier.

We have all of these senses. And we largely ignore them. Body language will tell you more than words will about intent. But we take that out of the equation. So it becomes surprising to us to learn about things like inter-species communication. Given our background and context, why shouldn't we be? But given our biology, this is what we should know.

And it starts with the birds.

Speaking of bird communication, naturalist Jon Young points out that there is "nothing random about birds' awareness and behavior." Drawing that out further:

The animals know the importance of this language, and they listen to it. This is how they learn about us, and the birds' alarms give them so much advance warning of our approach that they can choose the manner and timing of their own retiring departure. Only rarely do they actually have to run away.¹⁸

This is something we all experience, whether we notice it or not

is another thing. You walk into the forest and songbirds go higher up into the trees and make an audibly alarming call. Not shockingly, that's an alarm call. And the alarm is often about you: the aloof human, the being that forgets it too is an animal. Our energy radiates and our stress is apparent.

Seen from another side, you likely caused a pattern of evasion called the "bird plow." Basically, it's all the birds fleeing. Everything else in the forest, fields, or marshes takes note immediately. It's such a predictable pattern to observe that by watching for it, "Native American scouts could pinpoint the location of invading cavalry troops from two miles away."¹⁹

We may not be paying attention, but the rest of the wild world sees that lack of interaction as cause for alarm. And they pay attention. Elephants in Kenya can distinguish Maasai languages from all others. The Maasai will hunt elephants, so they know to act. Upon hearing Maasai voices, the sound of the cowbells the Maasai put on their cattle, or the sight of Maasai garments, elephants were observed having "moved closer, then turned and retreated—usually by running—up to three hundred yards away, where they clumped closely together, with their young protected at the center of the family group."²⁰

Normalcy returns in our wake: when the rest of this actually connected world realizes that the human intruders are predictably not paying attention to them and things go back to stasis. Our behavior becomes predictable and animals will even take advantage of it. I recently caught a sharp shin hawk hunting in the wake of disturbance caused by my car as I drove through the National Forest. It's not uncommon to see hawks, eagles, or herons hunting in plain sight around humans, only taking to flight immediately when they can tell that they've been spotted directly. For them, our direct attention is abnormal behavior for how they understand us.

That's not to be taken as a positive critique of our ways.

What this means is that we have to get past ourselves. It means acting with awareness and attention. There's no short cut here. There's no end point to this process, but it begins with confronting what we don't know. With seeing what we aren't visualizing. At a certain point, we have to trust in the honesty of the wild. Then we can start picking up the cues.

And here, even science is starting to catch up a bit.

German forester and ecologist Peter Wohlleben drew out the interrelationships of forests in his recent book, *The Hidden Life of Trees*. Life beneath the forest floor is a series of interconnected root struc-

tures. Trees have families and can distinguish the roots of their relatives from those that aren't. Mycelium interlace between those root systems, sending communication, nutrients, and nurturing between trees. The forests, as Wohlleben states, "are superorganisms with interconnections much like ant colonies."²¹

So if the terms I'm using here make you uncomfortable, there's the science to back it up. This web, this network and community of the wild, isn't proverbial; it's physical. It is there. And, by and large, it functions as a whole. Messages are passed and acted upon. Intentions are fairly clear. It doesn't need to be a peaceable kingdom or whatever garbage religious notion we might have of heaven, it just works well this way.

Of course, we make it harder to see this because we surround ourselves with domesticated plants and animals. These are beings that have been bred for performance in an artificially structured reality. This isn't to say the wildness is completely gone for them, just more subdued and circumstantially denied. They too are stunted in their development. They too aren't seeing the kind of communication and networking that is being talked about here in healthy forests.

As Wohlleben explains it:

*In the symbiotic community of the forest, not only trees but also shrubs and grasses—and possibly all plant species—exchange information this way. However, when we step into farm fields, the vegetation becomes very quiet. Thanks to selective breeding, our cultivated plants have, for the most part, lost their ability to communicate above or below ground—you could say they are deaf and dumb.*²²

Planted forests lack these familial relationships. For trees bred and raised in orchards and nurseries, the "mechanics of planting also haunt the trees for the rest of their lives."²³ The trees that line fields and city streets, raised without community become the street kids of their species. Trying to figure it out on their own and left for decades without other trees for their roots to connect with.

It's easy to make the allegory with our own lives here.

We suffer the same. Period. End stop.

But there's more to it. This is what we're missing out on. It's a glimpse of what we, as a species, have evolved to take part in. It's that part of us that each of us is constantly trying to fill with some new thing, some new habit. For science writer Virginia Morell, that reali-

zation came amongst a “room full of laughing rats.” For her, “if there was a moment that encapsulated all that we don’t know or miss about animals, for me, this surely was it.”²⁴

What we are missing, from our own lives and from the lives of everything that surrounds us, is, quite frankly, depressing. There have been times where these kinds of “obviously” realizations were almost just upsetting to me: all of the ‘how did I not know this already’ moments. Missing out is a pretty horrible feeling, even if it’s ultimately something we can overcome.

However, when that missing out translates into not seeing what our indifference is causing, that is tragic.



Luna moth. Photo by Yank.

What We Have Done

Just as humans have a history of their relations with animals, so also animals have a history of their relations with humans.

- Tim Ingold, *Perceptions of the Environment*.²⁵

There's a sense of awe that floods in when you hear it: a few quick yips, perhaps some barks, quickly erupting into a symphony of howls and yipping that seem to draw out voices all around you. The hills come alive, in this case, quite literally.

This is the sound of coyotes howling. And it goes quickly. Sometimes it will happen multiple times per night, other times more sporadic. The speed and intensity, each coyote capable of sounding like a

dozen at a time, can itself be humbling. It has a way of stilling all other life at the moment.

And for us, it should: coyotes are a lot like us. Where we cross paths, there is significant comparison. Like us, coyotes are social animals. They're adaptive and resilient in the same ways we are. During the last ice age, much like us, they flowed easily between hunting, scavenging, and foraging. They have societies built around fission-fusion; meaning, they move between solitary and group life, as circumstances demand it. Once again, much like nomadic hunter-gatherer bands.²⁶

Where we separate, on the other hand, is nothing short of horrifying.

There are two confirmed incidents of coyotes killing humans.²⁷ Whether those were coyote-dog hybrids responsible for the kills is in dispute. Not in dispute is the complete war that civilization has waged on all things wild. And predators bear the worst of it. As Dan Flores puts it in his excellent book, *Coyote America*:

*Coyotes still do one thing more than anything else: die, at a rate unmatched by any other large animal. ... The best guess is that altogether we kill about 500,000 of them a year. Roughly once every minute, about the time it takes to read this page, someone somewhere is ending the life of a coyote.*²⁸

Even amongst contemporary ranchers, coyotes are considered a "parasite of civilization."²⁹ The kind of sentiment only a farmer can utter without a drop of self-awareness. With religious fervor and colonial gusto, the conquistadors, the farmers, the corporations, and politicians sought to eradicate life in the New World as quickly as they could. Completely oblivious to the implications that might arise, the goal was control.

The coyote isn't exemplary here in their targeting. Bison, wolves, pumas, and numerous others had an immediate target on their back. Either a potential source of food for the native populations the colonizing forces sought to eliminate or to "bring into civilization" or just a semblance of a functioning world, there was no room for competition. Unlike the passenger pigeon, puffins, and whales, killed by the consumers' indifference in an orgy of 'take everything,' the level of plotting and planning that went into and continues to go into this war on predators is terrifying.

The means of eradication include sniping predators, including

aerial hunts. But if you want to take out a species, shooting is hardly the most efficient means; poisoning is. That the term “predicides” exists causes my blood to boil. The kind of results you get when searching it on the internet can result in blind rage. I don’t recommend it, but I do encourage it.

This has meant putting deadly poisonous canisters on the collars of sheep, placed exactly where wolves, coyotes, and mountain lions are going to bite. It has also manifested in lacing animal carcasses with poison for would-be scavengers. Ever the observant ones, coyotes quickly caught on to the fast acting lethality of strychnine. The propagators of ecocide proved industrious, opting for slower and far more agonizing poisons.³⁰ All of this left a legacy that ravens still carry the memory of, even if we’ve chosen to forget it. As Carl Safina writes:

*Wolf kills attract ravens by the dozen. Yet if humans put out elk carcasses, ravens generally ignore them. Ravens trust wolves. Ravens don’t trust humans. The memory of poisoned carcasses must still be a lesson in the raven educational curriculum.*³¹

Where the coyote stands out is its resilience.

Fission-fusion has allowed adaptive responses to what can only be called genocidal campaigns. That symphonic howl is a check in. They know whom they are hearing even if the multiple voices were meant to conceal their vital statistics from predators. In this case, that means us.

Despite what we have thrown at coyotes, they persevere. Flores elaborates:

*With beta females breeding, fission-fusion in high gear, large litter, and more surviving pups, even reducing the total population of coyotes in a given area by 70 percent—not just once but year after year—produced no appreciable effect on coyote population density!*³²

Despite being endlessly impressive and inspiring, coyotes, like all wild beings, haven’t gone unscathed.

G.A. Bradshaw first diagnosed post-traumatic stress disorder (PTSD) in captive elephant populations. Young bulls brought to sanctuaries were usually found surrounded by their family members, having been slaughtered by poachers for their ivory. Emaciated, alone, and often in shock, being handled by humans, even with good inten-

tions, doesn't mitigate the consequences of their capture and relocation.³³

Perhaps there's a part of us that simply wants to believe that animals are automatons because we fear being judged. Having sat with a mother doe as she bled out with four broken legs while her fawns watched frantically at a distance, I understand the want, but the reality is there: wild populations don't just know what is happening; they too have to live with it.

These are the consequences of civilization.

And the further you step outside of your own captive comforts, the more you come face-to-face with this. This is where your brain begins to pull back. This is why rewilding is a process. If we could truly feel the impacts that we have on this world, not a single one of us would be able to step foot in a car, handle a machine, or go back to work again. That would be it. Even without knowing it, that is what is happening to many of us. Unable to cope with the reality of civilized life, mental illness is constantly on the rise. Suicide is a particularly civilized phenomenon, much like mass shootings, yet we simply accept them as the rates climb.

Ignoring the root causes of our depression and anxiety might be a luxury we can bask in, but it is not a reality that we can avoid.

Bradshaw didn't stop with elephants. Her understanding of PTSD in wild and captive populations spread through the mammalian world and then beyond. "All captive-held wildlife," she writes, "who by definition are denied normative social interactions and the expanse of natural habitats, live lives of profound deprivation."³⁴

Even if our captivity is largely social in nature, that still includes us.

We break that barrier mentally when we break it physically. And it's unfortunate to even have to say that. It shouldn't have to take likeness for onlookers to know a dog was in pain while Descartes was publicly butchering it. Just the same, we should know that sticking an orca, a being that communicates over unimaginable distances through sonar, alone in a concrete pool for entertainment is just wrong on every level. We don't deserve to be shocked when a captive orca breaks everything about how orcas and humans have interacted for potentially all of our sea-faring past to kill a trainer at SeaWorld. We broke that animal. Not vice versa.

We do this by giving the wild credit for what it is or potentially might be. We use our own miserable lives as the measure of worth. It's a punch line without a joke. Quoting Safina again, "we impose

a self-isolation that deprives ourselves experiencing so much of the world's persona."³⁵ We truly have kept our deified pride of knowledge from us really understanding anything. Until recently, scientists thought turtles were deaf. Meanwhile, river turtles use up to eleven different calls to guide their hatchlings towards them.³⁶

There is a path back to this knowledge, this experience. It can be ugly. Even at its best, it is difficult not to stumble into walls that you didn't know were even there. But when you start forcing situations where you have to actively get beyond yourself, this reality only becomes more apparent. We stop being the center of the universe. We can find comfort in being a small part of something unthinkably vast instead of the isolation of numbers that permeates civilized life. Living doesn't require a solution to all of life's problems; an understanding based on respect is far more functional.

Blundering down that path, it becomes impossible to not be confronted by the fact that the veneer of isolationist hubris we have built around ourselves isn't protecting us; it is mutually suffocating for ourselves and for the Others.

There is a flow, a rhythm, which surrounds us.

And that is where ideas about supremacy and delusions of control go to die.

The Nature of Stability Versus Stagnancy

All organic exchanges are movement. They are in flux, all happening together in the now. Thought divides that movement up into past, present, and future, thus creating the idea of time. But the past and the future are happening in the present.

- Paul Rezendes, *The Wild Within*.³⁷

The most impressive morels I've ever found were surrounding dead and dying elms.

Typically reaching over a foot in length, they too can find a way of camouflaging into the forest floor. When you find one of these spots, it's worth keeping to yourself.

But they're also fleeting. I've found these spots and gathered morels from them for a year, sometimes two, a couple of times three, but that's it. The ecology behind these monster mushrooms is transitory. Unfortunate doesn't quite cut it. It's beyond disappointing to find a spot like that only to hit it at the last year where the dying tree was going to feed into whatever precious equation that yields a towering

and delicious fruiting body.

That, however, is just the way it goes.

There's a lot of armchair confusion about the nature of ecology. The idea that stasis and ecological stability lies in repeatability: in a word, stagnancy. I see that as a nod to the agrarian idealists, believing that their domineering mimicry of biological cycles is a substitute for the real deal. As we've seen, maybe it's not their fault since they're dealing with debilitated plants and soil in the first place.

Farmers need an untenable level of control. What distinguishes horticulture, or 'forest gardening' of sorts, from agriculture is the manipulation of waterways. And that happens because their typically weeded and plotted rows of crops require inputs where natural cycles would have previously done the heavy lifting. Fertilizers, earth-movers, moisture, and soil enhancement don't come naturally in the field or the gardens that just apply agricultural techniques on a micro-scale.

There is a direct correlation in the history of civilization between the size of a society and the shrinking number of resources it becomes reliant upon. Nomadic hunter-gatherers are the epitome of resiliency: their diet varies based on ecological patterns that include droughts, famines, and periods of flooding.³⁸ Some animals adapt better than others and we have the ability to hunt them.

A wild diet is filled with options. A grocery store mostly centers around variations on about a dozen cash crops and bastardized, processed renditions of them. Then add in stabilizers, supplemental nutrients, and, of course, lots and lots of sugar. When you shrink your world to that few resources, it takes a whole other world of resources from oil to water, but mostly oil and water, to sustain a precious equation that artificially favors their growth.

Again, it would be a good allegory for civilization, but it is literally the basis of civilization.

Being a fan of options, I'm also a fan of wild mushrooms. Some primitive skills gurus have apparently discouraged mushroom hunting and identification, in true survivalist terms, as a caloric sinkhole. Effectively that it takes too much work finding them for the amount of energy you get back. Not only is that wrong, it's just plain stupid.

Some of that bias is based off of conventional white mushrooms. And if those were an indicator for not just some mushrooms, but an entire category of flora, then we might as well say that the meat you get from wild herds of bison is roughly the same in terms of quality, nutrition, and sustenance as factory-farmed and grain-fattened beef.

The only person willing to feed you that line is the person who is making profit off of feedlot beef.

Fortunately for those interested in rewilding, enskilling, or just experiencing the wild, we don't require biological justifications for every ounce of energy used. I hunt mushrooms because I like it. And I'm not alone here. Carrying the bias against mushrooms, a lot of anthropologists seemingly never even recorded them as a source of food. Anthropologist Kevin Duffy, however, paid attention. Living amongst the nomadic hunting and gathering Mbuti, he noted that they ate mushrooms nearly constantly. Hardly considered it a meal without them.³⁹

It helps that mushrooms are intensely important in terms of nutrients and medicinal properties. By and large, they are vastly vital for ecological stability. More importantly for us, they're incredibly important for ecological recovery through bio-remediation.

And honey mushrooms are no exception.

"Honey mushroom" is actually an umbrella term for a group of similar mushrooms that grow over much of the world. But they're close enough that one bandage label seems to work out all right. In terms of medicinal properties, they're anti-bacterial, increase blood flow, prevent respiratory and digestive tract conditions, and can offer an analgesic effect, if needed. Though we have much to learn about all mushrooms, we do know that honeys have a symbiotic relationship with orchids in Asia. This is equally likely to be true everywhere else they grow.⁴⁰

They also taste pretty damn good when fried.

Gardeners *hate* them.

Even while being poetic about the role of mushrooms for networking with trees, Wohlleben, our forester expert, claims: "None of the seven honey fungus mushrooms native to Central Europe ... do trees any good."⁴¹ Horticultural web-forums lament personal battles with what they consider a "disease." Noting, discouragingly I might add, that the tough rhizomes of honeys make chemical fungicides largely ineffective. Commercial operations are advised to sterilize the soil. Gardeners are advised to clear everything out around the fungus to keep it from spreading.⁴²

So who is this devilish fungus, this great destroyer? Turns out they're some of the oldest and largest living organisms in the entire world. In Michigan, a single honey mushroom rhizome was found to cover 37 acres. Weighing at least 50 tons, it is estimated to be about 1,500 years old. A couple years later, that find was overshadowed by

another rhizome in Oregon. This time covering 2,400 acres, likely to be 2,200 years old.⁴³

If I had to wager what constitutes a pest in the wild, I'll take the wisdom of the oldest and largest living organism over gardeners and forest managers. The problem here is that honey mushrooms are a parasite. And in our fairly restricted and loaded view of the world, parasites take. Ecologically speaking, they give too, but if stagnancy we seek, a stasis that incorporates change we must fear.

In reality, the honey mushroom is a habitat creator. And one that seemingly gets little credit.

If mushrooms have a support network, Paul Stamets leads the charge. According to him, honey mushrooms:

*will attack a tree, causing devastating root rot and hollow brown core rot. As the diseased trees in the forest die, the wood dries and may catch fire if struck by lightning, especially if located on ridge-tops. The forest fire often cauterizes the soil, killing the Armillaria that originally killed the forest. The result may be high mountain meadows inhabited by grass until a new forest regenerates. Fires help create meadows which, due to their low wood content, provide fire-breaks and forest disease-free zones. This cycle of forest to meadow to forest may be healthier for the ecosystem in the long run because with each succession the soil biosphere is enriched as soils thicken.*⁴⁴

Wohlleben would be among the foresters that Stamets credits with acknowledging that "a rotting tree in the midst of a canopied forest is, in fact, more supportive of biodiversity than a living tree." For some reason, according to Wohlleben, when a mushroom uses that rot to propagate itself, it hasn't yet proven its good-doing to him.

As Stamets elaborates, honey mushrooms parasitize trees with some degree of damage, leaving the stronger plants alone. Garden varieties would rarely pass that bar, so it's not shocking that gardeners hate the fungus. "Ultimately," Stamets writes, "parasitic mushrooms set the stage for the revival of weakened habitats that are too stressed to thrive."⁴⁵

I'm reminded of one of Paul Rezendes' recurring points: how abstracted and disconnected thoughts, just being lost in our own logical reinterpretation of the world, keeps us from accepting and connecting with the world on its own terms:

*Thought has taken over our lives in more ways than we can even begin to imagine. In order for awareness to enter our lives, we need to understand how thought envelops us, permeates us, and controls us.*⁴⁶

It's a reminder that sometimes the most illogical thing is the common sense reality. It's just a matter of expanding our scale and perception beyond ourselves.

It's a reminder of the importance of context. Looked at from that larger, wider, and deeper perspective, the more we see that context, the more we begin to see ourselves within it.



Kestrel. Photo by Yank.

From Observation to Integration

Knowledge of the world is gained by moving about in it, exploring it, attending to it, ever alert to the signs by which it is revealed. Learning to see, then, is a matter of not acquiring schemata for mentally constructing the environment but of acquiring the skills for direct perpetual engagement with its constituents, human and non-human, animate and inanimate.

- Tim Ingold, *Perceptions of the Environment*.⁴⁷

The world is a fairly forgiving place.

Unlike the technosphere we have isolated ourselves in, there aren't nearly as many circumstances presented in the wild that are likely to prove themselves fatal. And people do die in the wild from falling out of trees, yet, much like the incredibly low rates of being preyed

upon by other predators, this is an exceptionally low probability. But the chances of dying in civilization from car accidents, drug overdose, fatal medical errors, preventable diet-related illness, suicide, homicide, or any of the illnesses that come along with industrial pollution and proximity with domesticated animals are perpetually creeping up.

What we give up is in exchange for the illusions of control. We accept the possibility of being killed, wounded, or debilitated by cars, yet we believe that we chose our role in an unspoken social contract just by being in or around them. As G.A. Bradshaw reminds us, we are capable of understanding carnivores or other potential predators if we just gave them the benefit of the doubt and learned to understand them as a species and as individuals. That's largely not true for technology. Things go wrong constantly and our degree of control is largely negligible.

Technology gives us the weaponry to create unforeseen and often unpredicted consequences for our actions. It feeds a disconnect that washes our hands of responsibility for what we do and our own complicity within civilization. In the wild, removed of such distractions, that physical and psychological barrier is suffocated in what can often feel like an air of vulnerability.

When we outfit ourselves with gadgetry and artifacts of mass production, we're giving ourselves a survivalist's lifeline to civilization. If you can move past them, then you can laugh at some of the growing pains along the way. But rest assured, we've had so many layers of domesticated vision put upon us that this journey isn't likely to end in our lifetimes.

And as nomadic hunter-gatherers would remind us, if we simply paid attention, laughing at yourself is a pretty vital skill: potentially even more important than the ability to create an impressive collection of primitive tools. Replacing our obsession of consumable material goods with wild crafted ones might improve your skills without ever checking your survivalist habits at the door.

The path to wildness requires shutting up and allowing yourself to be shut up. Sometimes you just have to stop and listen, pay attention to the alarms, the calls, the signs, and the behaviors. That's especially true when you are the source of them. The connections become apparent beyond thought. The process of peeling back begins; one stupid preconceived notion at a time, unraveling our lifelines to the iron lung.

Observation is a vital step. But observation alone doesn't take

away our status and stasis as spectators of life rather than as actors within it. Rewilding is about moving beyond observation into integration. The back packer and bird watcher are intent on leaving only footprints; rewilding is about leaving yourself behind. To learn and understand the larger, wild context so that we may become a part of it.

For Jon Young, bird language is an entry point:

When we train ourselves to listen to the birds with every synapse of our brains (or so it may seem), when we “lose our mind” and “come to our senses” in the fullest possible way, the chattering, texting, e-mailing, twittering mind will eventually quiet down and almost silence itself. This is a sacred and connected silence, and within this zone we can choose to turn on the conscious thoughts or leave them off. ... I believe this is the baseline for human consciousness, and I’m convinced that the birds are the best mentors in the natural world for bringing us to it.⁴⁸

And you might be looking at all of this and reading it as more conjecture about some new age or hippie poetics over perceived relationships when really it is all just matter and nothing more. You might be asking yourself what the point of any of this is. If you believe the domesticated commandments that all experience is the subjective construction of our individual lives and there are no universals or buy into the mythos of human uniqueness—a legend backed either by fantastic gods or lifeless sciences—then all of this likely means nothing to you.

In a way, that’s my point: I’m not interested in selling you on any of this as a consumable identity or a philosophical platform. What I’m talking about here is myself lamenting the limitations imposed on us by language. It is about the battles that I have faced when challenging the traps we present ourselves through survivalist conventions. Escaping the tendencies of seeing the world as something to solve, a place where my Self exists.

That circumstance is a historical creation: one tied equally to the fate and destiny that awaits any civilization.

And that circumstance too will collapse.

Ecologically and biologically speaking, civilization arose because a tiny handful of humans slowly drifted into a position where our resiliency turned against us. Building settlements around bumper crops of wild grains during periods of ecological shifting may have been a

series of non-events until those camps turned into sedentary societies. A shift occurring as those wild harvests turned into agricultural yields.

The reality is that the Holocene created a level of stability and predictability that made agriculture possible. And climate change seeks to quickly undo that. We have evidence within the living history of our bodies and minds that we are capable of the resilience it takes to shift back out of this. And in doing so, we face the potential that we may one day break out of the survivalist mentality altogether and actually live: to experience community and a comfort in an ecological stasis where flux and flex are the norms.

I can put into words points in my life where I have stumbled. But it is harder to put into words points where I have not. Moments that exist beyond description, or at least risk the chance of feeling like those moments were profaned through attempting to transcribe them. But they too are a part of this journey: moments of communicating with another species, periods of receiving discomfiting word that comes with the feeling of being a part of something rather than alone, or just times when you're swimming in rivers with friends, knocking each other off of boulders with mud balls surrounded by a seemingly unending forest of wild edibles and, if only for a moment, you catch that glimpse of how we were meant to live.

We evolved to be nomadic hunter-gatherers. Everything our brains and hearts yearn for exists within that way of living, that way of interacting with the world.

And yet we are stuck within patterns where each part of our being and all of our wants and needs are distorted, torn apart, repackaged and sold back to us through the process of domestication. It is killing us. It is killing our world. It keeps us separated, trying to pull together some semblance of worth in isolation.

At a certain point, the unsustainable nature of that world becomes a cold, hard reality. Most likely all of us and our children will have to face that.

What I'm saying is that we don't have to wait. This is accessible to all of us. Wildness knows no boundaries, it is the world that we suppress with pesticides, herbicides, and herbicides, but it never gives up. It is strong. It is resilient.

Yet it remains under attack.

The veneer of control that we grasp desperately to seeks to bleed everything from this world. It would gladly continue beyond it if it could. We become numb to it. We accept that drive. We reach for its

reassuring impulses because they're the only ones we are trained to acknowledge.

From that vantage point, everything has a logical argument for why it exists. There are moral, ethical, and rational arguments to justify why we do what we do. And for why we say about what it is we're actually doing to ourselves and this world.

From the vantage point of having your precious reasoned arguments and categories thrown back in your face, grounding exists beyond reason, logic, and morality: what we are doing to our planet and the communities that embody it is wrong. When you feel that pain, when you glimpse at what is being taken from us, taken from the Others, robbed from a living history that has yet to transpire: there is no question about what is to be done. There is no moral code, no list of commandments, no ten-step plan; only resolve.

When we become context, as we fumble through shedding our layers, we find a primal, beating piece of ourselves that has been seething all along. That part of your mind that whispers to you at night about feeling like everything is wrong. That part of your heart that won't calm down as you try to distract yourself back into your comfort zone at night. Deep down, like any other captive animal pacing in its cage, we know this isn't right.

We have to acknowledge that we are the perpetrators.

It is a common misconception that the purpose of the anarcho-primitivist critique of civilization is that we will one day become nomadic hunter-gatherers. The purpose is to show that you always have been one: we've just been conditioned to survive as captives.

And, ultimately, that too is a choice.

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- 16 Safina, 2015. Pg 357.
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- 31 Safina, 2015. Pg 192.
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- 41 Wohlleben, 2016. Pg 120.
- 42 See, for example, <http://www.hortweek.com/pest-disease-management-honey-fungus/arboriculture/article/1105422>
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- 48 Young, 2013. Pg 182.

DISCUSSION



Juvenile Great Horned Owls. Photo by Yank.



Dear editor,

The problem with nihilism as I see it is that it discounts the possibility of being wrong. And more often than not, it says to everyone else, that this is definitely the way the future will play out, that it will inevitably be a disaster, that there is no point and that there is no chance of winning (or even the false assumption that there cannot even be a way of defining winning in any objective way, if you believe the post-modernists).

But doesn't it seem like more than a coincidence that nihilism would be the ideal route (for those in power) for dissidents to take? A docile and self-destructive route at best, and more dangerously, a counter-productive route that reinforces the hierarchies of power. I'm sure the powers that be would prefer there to be far more nihilists who, by very definition, would refuse to judge them for their actions. And doesn't it seem like a very convenient excuse for just choosing a lifestyle of least resistance, of least autonomy, of least personal discomfort? After all, if there is no right and wrong, there is no reason not to jump down that rabbit hole and enjoy hedonism. If there is no right and wrong, then you do not have to take responsibility, either in the sense of accepting blame or complicity, or in the sense of accepting the need to respond, to act. If there is no right and wrong, you cannot, by definition, be wrong.

But what if the nihilists and their bedfellows, the post-modernists are wrong? What if there is objective truth? What if there is justice? What if night does follow day after all? What if the alleged acts of ITS in random murder aren't actually committed in a void of meaning? What if the destruction of the very ecosystem we are part of is actually a bad thing?

It is kind of important. It's kind of a big deal. The world faces an

existential crisis after thousands of years of assaults on its ecosystems and biosphere, the viciousness of which went exponential over the last couple of hundred years. This isn't a game, or an intellectual exercise. This is for real, and it is happening right now.

What if there is hope? If the scientists are wrong, or at least, their timings are? What if the earth can repair itself far more effectively than we like to pretend, if civilisation were to fall? What if human beings are still capable of returning to a pre-civilised state in numbers? A damaged planet, suffering a major depopulation of human and non-human animals alike would be likely, and certainly incapable of returning to its dubious former glories afterwards. The easily obtainable condensed fuels that made it possible would no longer be there in enough quantities to rebuild and sustain such a set of living arrangements. With no way of continuing with the status quo, opportunities for anarchy to thrive and new forms of cooperative and mutual small scale communities are there, especially with the horrors of what happened under mass society and its fall still fresh in their minds. This might be the best we can hope for, and is definitely worth fighting for. A chance for the ecosystems we depend on to repair, without the risk of a repeat of the disasters that went before, and with communities emerging that reject hierarchy and mass society - that doesn't sound so terrible to me. The civilisation we find ourselves prisoners of is certainly in a vulnerable state right now - perhaps the nihilists could rise from their apathy, decide to take a stance on the morality of something (don't like the cultural assumptions behind the word 'morality'? Call it something else then!) and test their mettle in helping that fall take place? You might be wrong, but it's worth a shot, isn't it?

We might be doomed. Maybe the damage is too far advanced. Maybe it was too late way before the industrial revolution, and the seeds of destruction, literally planted 14,000 years ago, flourished before we were able to realise and stop the outcomes. In which case, isn't it possible to come down off the fence and say that those in power now, who almost certainly are well aware of the state of the planet and what their actions now are likely to result in, can be judged? Building nuclear weapons that could wipe out most life on the planet? Building over 400 nuclear power plants that they know that a large proportion of are likely to melt down in the event of an abrupt fall? An event that could strip the planet of its atmosphere? And for what, feathering their own deathbeds while enslaving billions and stripping you of your right to be a part of this planet and its rich communities of life. Isn't that worth judging? Isn't that worth action? Shouldn't they

be held to account with extreme prejudice? Fight, dammit. Isn't that worth the risk of being wrong?

I have no time for these people. I have no time for people who choose to close themselves off from reality by pretending that there is no such thing as inherent worth. They are part of the problem, and useful only to those in power.

I do not know the future. I do not know if there is genuine hope, or a chance for recovery for our shared planet. But there might be. And that is worth fighting for. That is worth sacrifice. That is worth judgment, of risk, and yes, of maybe being wrong.

Regards,
David from Wales

Friends and Agents

Jason Rodgers

I have come to terms with the fact that in my daily life I have almost no friends. The people I encounter everyday have no draw to me. I feel little empathy for them at all. They feel like nothing more than sheep and more often than not are merely in my way. Often I would just rather shove them.

I feel assured enough in myself to not need to spend time with someone just for the sake of spending time with someone. This sort of convenience based friendship functions as a narcotic, dulling one's sense from the actuality of one's existence.

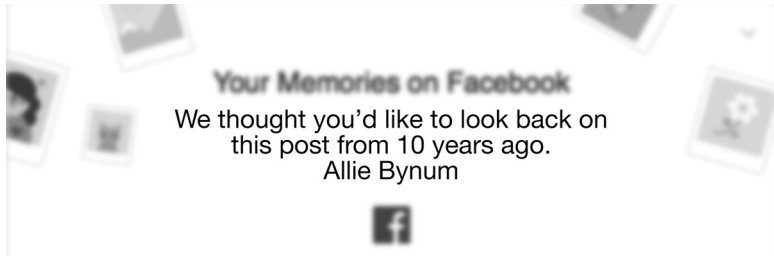
To be harsh about this, I don't think my situation is unique. Almost no one has any actual friends. As the march of technology continues, the definition of friendship is further weakened and degraded. A friend is a name on a list on Facebook for most people. Actual relationships are a thing of the past, but a constant barrage of distractions are now standard.

When I was talking about this with Kat (my spouse), she said that a friend is someone you tell your secrets to. I agree. But trust has to come first. Building this level of trust is building friendship. Solidarity in a real sense (as between individuals) is a necessary component to friendship. In most cases people are agents without even knowing it. Sharing your secrets with them just helps build a dossier.

I don't deny the power of friendship, I deny that it is experienced by most. I affirm the power of friendship, agree with the insurrec-

tionaries that “friendship is a weapon,” and hold that friendship is the basis of affinity. It is the only valid organization principle.

That is why I write. Almost everyone that I feel a strong bond with I know through postal letters. Through writing I seek comrades, attempt to build unions of self owning ones. Lying about the alienation I feel in daily life does nothing to alleviate the situation. Claiming acquaintances as friends merely degrades the term. Best to act as if the term could actually mean something, even if that means that I am alone. Better a lone wolf than a collaborator.



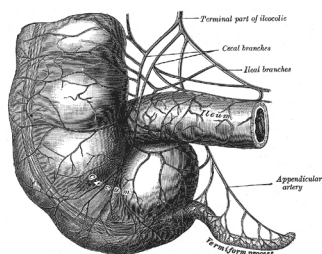
Who is “we” and why on earth do they want me to remember what I was doing when I was 16?

Not that many years ago, we did not have tons upon tons of digital images overflowing from the storage of our phones, tablets, and laptops. We had scrapbooks and concrete photos that we could touch and feel. We had a few select memories that were special and recognizable. Picking up an old Polaroid photo was like smelling school on that first day of Kindergarten. Now at the palm of our hands, we have notifications beeping daily to remind us who we dated 5 years ago, what we ate for breakfast on May 25th 2014, and where we were on this exact day just 1 year ago. So that gives us a lot to compare ourselves to where we are now. I am not eating a stellar bacon feta omelet on this day; I am only eating a lousy bowl of Frosted Flakes. And, shit, on this day 1 year ago, I was soaking in the radiance of the mountains behind Colter Bay in a state 1,900 miles away. What the hell am I doing with my life now? I am sitting in bed looking at pictures of what I was doing “On This Day” for the last 5 years and now incoherently comparing it to what I am doing now.

This scares me. It scares me to think that I am not the only one doing this on a daily, weekly, and monthly basis. It scares me to think that a lot of people do not even realize how it may be affecting them. It scares me to think that this is our generation and that kids are being brought up never knowing what a tangible memory, such as a Polaroid, is.

When reminded daily of what we were doing years ago, or even 1 year ago, I feel that we often unknowingly begin to compare our lives to the past us. We begin to wish we were somewhere else doing something cooler or just something, anything, away from what we are doing NOW. And this is sad because it takes away from present experiences. It pulls us somewhere else in our mind so that we are not able to fully embrace the now, even if it means sitting in bed on a rainy day in Tennessee versus exploring a new mountain range out west. And, maybe I am crazy. Maybe it's just me. But I see a lot of all-to-familiar feelings in those around me. A lot of wishing and reminiscing. So, how can we fully embrace the now? Does it mean getting rid of social media and its entirety?

If we could discipline ourselves to remember to embrace today and where we are now, rather than beating ourselves up trying to get back to where we were years ago or even 1 year ago. Now is all we have today, and time already slips by so fast. Today is just as significant as any other day, and I feel that no matter where you or I are on this day, in this moment, it is special and something we will not get back. So, rather than looking back on what you were doing "On This Day" in the past, spend this day in the moment with the people you love and appreciate these experiences for what they are, instead of what they will become.



*Everything is connected
after all.*

Queequeg

Indigenous perspectives tend to frame the world in terms of remembering, while scientific ones look instead for discovery. Where the civilized mind sees the world as a *tabula rasa*, with each generation rewriting the realms of knowledge and possibility, the indigenous one understands that our biggest threat is forgetting who we really are. Many creation stories speak of a time long ago when people and animals could speak freely to one another and how this knowledge has subsequently been forgotten. Oral cultures rely upon knowledge being carefully safeguarded, something akin to the Svalbard Global Seed Vault in Norway which, ironically, was recently the victim of a flood due to catastrophic global warming within the Arctic circle.

The pain of forgetting is a common theme in the stories of tribal people forced into civilization. An excellent fictional example of this comes from the recent South American film *Embrace the Serpent*, which tells the story of Karamakate, a shaman living in the Amazon rainforest in the first half of the 20th century. At first we see him as a young man fully in touch with his surroundings and brimming with knowledge. Years later, following the arrival of civilization in pursuit of rubber trees, Karamakate is older but no wiser. Lamenting the loss of his culture he tells us “*I can’t remember. These rocks used to talk to me. They answered my questions. The line is broken, my memories are gone. Rocks, trees, animals, they all went silent... Now I’m empty...*”¹

In perhaps his best work, *Red Earth, White Lies: Native Americans and the Myth of Scientific Fact*, the great Vine Deloria does a brilliant job of ridiculing the discoveries of the modern age. Piece by piece, he examines the evidence for the scientific myths many still believe in such as the Bering Strait land bridge, the mass extinction of megafauna, various cosmic events and the formation of several well-known American land forms. In each case Deloria is able to show how indigenous memory, in the form of so-called myths or stories, actually provides a more accurate description of events than scientific “fact.” Sadly the rest of us have been slow to catch up with these indigenous sources of wisdom, as they tend to fly in the face of the myths civilized people are taught as fact. Take, for example, the best-selling author of *Sapiens*, misanthrope Yuval Noah Harari, who describes humans as “an ecological serial killer,”² responsible for the extinction of megafauna across the globe long before the advent of agricultural society.

Thankfully such nihilism can be easily countered through a better understanding of human existence as told by so many tribal elders. In the case of the extinction of megafauna, Vine Deloria’s refutation of such claims is perhaps the most “scientific,” but oral history also presents a strong case against civilization’s prevailing myth of the destructiveness of human nature. The prevailing civilized myth around the Bering Strait land bridge has been questioned more widely in recent times. In the April, 2017 issue of *Nature* magazine³ it was reported that humans may have arrived in California around 130,00 years ago, and not 15,000 or 20,000 as we had been previously taught.

As early as in Plato’s *Phaedrus*, Socrates, on encountering the countryside, proclaims that “*I’m a lover of learning, and trees and open country won’t teach me anything, whereas men in town do.*”⁴ In sharp contrast to “the three Rs” (reading, ‘riting and ‘rithmetic), indigenous people understand that wisdom comes in the form of the three Ls.

Look. Listen. Learn. Vine Deloria makes similar observations, noting that:

*The major difference between American Indian views of the physical world and Western science lies in the premise accepted by Indians and rejected by scientists: the world in which we live is alive. Many scientists believe this idea to be primitive superstition and, consequently, scientific explanation rejects any nuance of interpretation that would credit the existence of any activities of the natural world as having partial intelligence or sentience presence.*⁵

Theodor Seuss Geisel, better known as Dr. Seuss, spent years drawing racist anti-Japanese cartoons for the New York newspaper *PM* during WWII. Years later, repentant and aware of the errors he had made, he wrote *Horton Hears a Who*, the tale of an observant and kind-hearted elephant who suddenly becomes aware of a colony of tiny people living on a speck of dust. The Whos cannot be seen by Horton's friends and so Horton is ridiculed for trying to protect this tiny community. But, as Horton reminds us in the story, "*a person's a person, no matter how small.*"⁶ While meant to be a warning against racism, *Horton Hears a Who* can also be seen as a kind of animistic work. What most of us see as lifeless is, in fact, teeming with life. Unfortunately the term *animism* has often been incorporated into theistic ways of thinking, ascribing god-status to various rivers, trees, rocks and so forth.

Yet for the indigenous mind, animism would appear to be something more akin to the understanding that all things are alive and are connected. *Mitákuye Oyás'ín*, as the Lakota say. We are all related. We are all connected. Luther Standing Bear describes this perspective well, lamenting on a lost time when:

*Kinship with all creatures of the earth, sky and water was a real and active principle...Everything was possessed of personality, only differing with us in form. Knowledge was inherent in all things. The world was a library and its books were the stones, leaves, grass, brooks and the birds and animals that shared, alike with us, the storms and blessings of the earth.*⁷

Fortunately, some are now beginning to rediscover that humans are in fact more connected to the earth than perhaps they would care to believe. Geneticist-turned hunter-gatherer Professor Tim Spector

of King's College London recently spent time living and eating with the Hadza band in Tanzania in order to learn more about the ways in which our environment affects human health, specifically the invisible world of the microbiome.⁸ The microbiome is a community of something like 100 trillion fungi, yeasts, viruses and bacteria which is primarily located in our colon and weighs about two kilograms. To put this into context, the microbiome contains ten times more cells than the rest of the entire human body and, at two kilos, weighs more than our brain or indeed most of our other organs. This discovery has led many in the area of microbiology to ask us to think of the microbiome as a human organ in its own right, alongside the kidneys, heart, liver and lungs. And, like these other major organs we know so well, we could not live for very long without the microbiome.

The importance of this new organ was underlined when he spent just three days living a hunter-gatherer life with the Hadza. While in Tanzania, Professor Spector enjoyed a very healthy foraged diet and later analysis revealed that in just three days of living a hunter and gatherer life the health and diversity of his microbiome increased by some 20%. There are many, many accounts of hunter-gather people suffering from a serious decline in health after being taken away from a hunter-gatherer way of living. Similarly, we are only now “discovering” that a microbiome lacking in health and diversity leads to a multitude of problems, including anxiety, depression and autism, conditions more or less unknown to our uncivilized brethren.

Even though the microscopic forces of the microbiome may be invisible to us, they are powerful and interact with us in important ways. Our microbiome is affected and nourished by everything around us, down to the air we breathe, the landscape we live in and our direct and indirect contact with the other living beings around us. Let's have the humility to accept that the tiny citizens of Whoville in our microbiome have the power to make us well or unwell and that we should all do what we can to nourish them.

For the wildness inside us all.

Endnotes

1 *Embrace the Serpent*, Ciro Guerra. Colombia, Venezuela and Argentina: Diaphana Films, 2015, approx. 17-18 min.

2 *Sapiens*, Yuval Noah Harari. Harvill Secker: London. 2014, pg. 80.

3 *Nature*, Steven R. Holen et al. Macmillan Publishers Limited: London. 2017, Volume 544, pgs. 479-483.

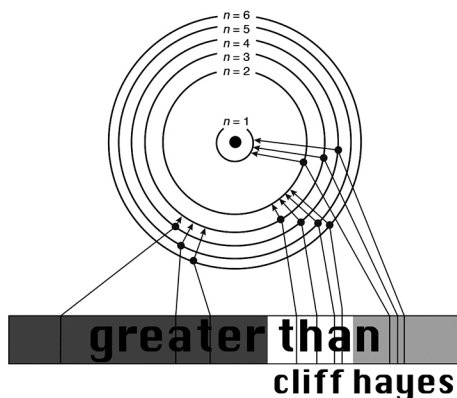
4 *Phaedrus*, Plato. Cambridge University Press: Cambridge. 2015, pg. 230.

5 *Red Earth, White Lies: Native Americans and the Myth of Scientific Fact*, Vine Deloria Jr. Fulcrum Publishing: Golden, Colorado. 1997, pg. 40.

6 *Horton Hears a Who*, Dr. Seuss. Random House: New York. 1954, pg. 6.

7 *Land of the Spotted Eagle*, Luther Standing Bear. Bison Books: Lincoln, Nebraska. 1933, pgs. 193-194.

8 *What a hunter-gatherer diet does to the body in just three days*, Tim Spector. <http://edition.cnn.com/2017/07/05/health/hunter-gatherer-diet-tanzania-the-conversation/index.html> retrieved October 15th, 2017.



In late 2016, I saw someone wearing a t-shirt with Niels Bohr's model of the atom and an equation underneath that model. The equation showed *SCIENCE* > *OPINION*. My first thought was that the Bohr's model of the atom was an opinion. It displays his opinion on how electrons were arranged in concentric circular orbits around a nucleus. I'm not equipped to lay out an essay on theories of atomic structure, some might even argue that atoms are not real (*schaumkommen* as Erwin Schrodinger said), but my point here is that science is built upon, and guided by, a variety of opinions.

Some of these opinions or theories are more persuasive than others and those that are most persuasive are generally accepted as proper scientific theories. It was Karl Popper who stressed that what counts as science is that which can be falsified – "...statements or systems of statements, in order to be ranked as scientific, must be capable of conflicting with possible, or conceivable, observations."¹ If you can't test it, it isn't science. But back to the t-shirt...

After thinking about the t-shirt, it was my opinion(!) that it was really saying something like, "My opinion is that science is greater than your opinion." Or perhaps in a more individually recursive way, "My opinion of science is greater than my other opinions."

So is this opinion of science true for all sciences? Or only the sciences that one might value the opinions of most? Is there a hierarchy to the sciences that holds one type of scientific discipline to be greater than the others? I would guess that physics would hold the highest rank of all the sciences, but there are plenty of unknowns in physics. I think that this is clear enough in its various theories on the fundamental nature of reality, or its current crop of candidates for a theory of everything. In fact, there is an entire branch of physics dedicated to fleshing out the opinions of physicists – theoretical physics. They largely air these opinions in a fashion similar to oratory debates. Only they use the language of mathematics to carry their debate forward. Here the over-arching opinion being that whatever reality is, it can be expressed quantitatively in the form of mathematical models.

I think one could make the case that physics rests on the opinions of physicists. There is no “Pope of Physics” (sorry, Enrico Fermi) deciding what is scientifically accurate or not. It would appear that physicists, in reality, have a wide variety of opinions and those opinions are what guide their individual scientific pursuits. I think this can be applied to the broader topic of science in general. That application showing that, if it weren’t for opinions, there would be no science. Therefore, if we were to attempt a simplified description of what science is in order to fit it on a t-shirt, I think a more appropriately flippant mathematical equation for describing the relationship between science and opinion is that “opinion = science.” Before any science can take place or be ordained as actual science, one has to have an opinion and that opinion is stated as a hypothesis to be tested in some way. Once the opinion is subject to falsifiability, its truth can be established through the statistical analysis of its test results.

Leaving the realm of science and entering the equally murky waters of anarchist thought, I believe there are some variations of anarchists who are of the opinion that DESIRE > HOPE.² I assume that they believe this because they feel that desire is an individual choice that can be acted upon by the individual. If I desire to eat an orange, I can act on my desire to find an orange and eat it. They believe that acting on their desire is something that they are in complete control of and thus find this form of personal control liberating. Especially when juxtaposed with the external demands made on them by various institutions that shape our modern society.

Those feeling this visceral connection to their desires might interpret hope as something more passive. With hope, one may say, you

aren't acting on your individual desire. Instead, you are waiting for others to act on your behalf to deliver whatever it is you are hoping for to you. To use the aforementioned orange analogy, if I hope to eat an orange, perhaps I am hoping that someone will deliver an orange to me to eat.

What I think these two words indicate is that desire is more analogous to an egoistic interpretation of the world. One where the world I perceive flows solely through my interactions with and interpretations of it. Possibly, there is no need for hope because I would have no expectation of things that are not part of me to care for me or about me. I suppose the one instance where this wouldn't be true is if things that "aren't me" want to use me to satisfy their own desires. In such a world, all existence is a stage for the individual desires of all to act out. On an individual scale, perhaps any sense of accountability I have towards the external world could be seen as something interfering with my own desires. Any demands originating from the external world that don't coincide with my internal desires can be interpreted as impediments to my desires.

Hope on the other hand, doesn't necessarily exclude my desire. I can still develop and pursue my own desires, but hope is the recognition that there are things and events that are beyond the influence of my individual desires. I may desire to eat an orange, but I hope that there are oranges still available to eat. I realize that the possibility of oranges existing is independent of my desire to eat one, or even my desire to grow one. Therefore, if I desire to taste an orange, I must hope that one exists somewhere for me to eat. Likewise, if the external world is nothing but the stage for individual desires to play out, then the individual would have to hope that the external world exists in order to provide such a stage for individuals to develop their desires. Desiring the world to be a certain way, or that it exist at all, does not make it so.

If I focus so narrowly on my own desires, then I understand how hope could seem like an impediment to my desires. I think this is precisely what our modern technological society promotes. Hope has the connotation that forces external to me are influencing me and they are beyond my individual control, beyond my individual desires, but technology is predicated on bringing those external forces under my control to meet the aims of my own desires.

Think of a very common biological event that takes place across various forms of life on Earth - childbirth. I may desire a specific life for my child, but how a child develops is not totally subject to my

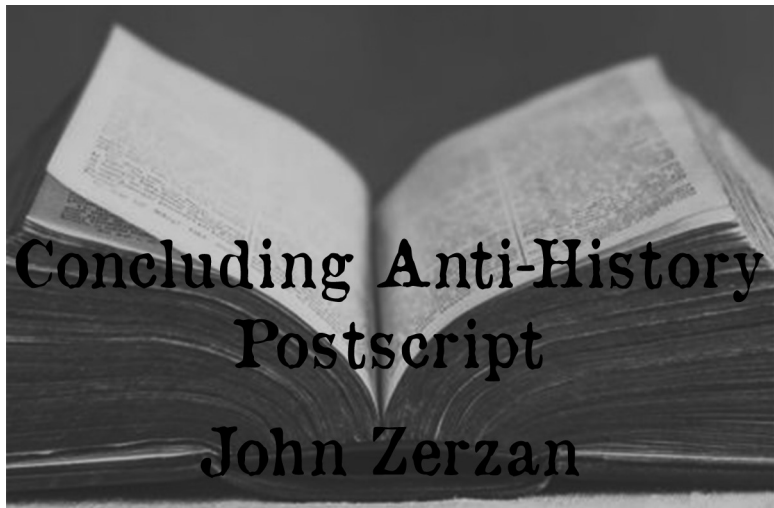
desires, or even the child's own desires. Their outcome in life is determined by various factors. However, what our technological society is promoting is a standardization of what one should desire – health, education, housing, employment, sustenance and so forth. So it seems to be perpetrated on a mass scale that you can achieve whatever it is that you desire, just as long as you accept the methods available to achieve your desires. All individual desires are shaped by their context and our modern context is that of a technologically dependent society. Life isn't a game of "name that reification" where the physicist's model of reality is mistaken for reality, or where some invent Platonic Forms and spooks whenever their internalized epistemology breaks down. To understand and embrace desire, one must accept that it is defined by the context in which it arises.

In this aspect, I see those that place such an importance on their own desires as neglecting the reality that your desires are not fully your own. To be honest with oneself, to have some sort of personal integrity, your desires should be tempered by hope, not in opposition to it.

Endnotes

1 Karl Popper, *Conjectures and Refutations*, London: Routledge and Keagan Paul, 1963, p. 38

2 Perhaps an aspiring anarcho-capitalist would design and sell a t-shirt with Nietzsche's famous mustachioed profile with that equation underneath.



We know that the past is always molded to sanction the approved order, its government and social institutions. History is written by the

victors. The story of civilization is not told by those who lost to the domesticators, the civilizers. But as we have seen, recurring transitions and crises are proof that civilization never enjoys a long, untroubled sleep.

Its ideologues have always presented a different picture, one of stability and pacification. A famous somewhat recent example is Francis Fukuyama's *The End of History and the Last Man* (1992), announcing the victorious end to the evolution of civilization. The world system of capital and technology is complete, upon the end of the Cold War; no further rough seas to cross. But in less than a decade the Anti-Globalization movement (1999-2001) provided a strong challenge to that hegemony in North America and Europe.

There's a lot more to history than questions of accuracy, of fidelity to events and currents. The most basic question would seem to be: What is history? In James Joyce's *Ulysses*, Stephan Dedalus says, "History is a nightmare from which I am trying to awake." Theodor Adorno referred to "the infernal machine that is history," pointing to its continuum of suffering. Everything has a history, and history has everything. Domestication requires storage; history is a form of storage.

Walter Benjamin counseled that we must go against the historical movement. The limits of history are increasingly being revealed to us. The historic dimension wears the mask of death. If the past is somehow to be redeemed, that redemption will occur outside of history.

Historiography, the study of history, does not concern itself with time. But the nature of history is very deeply tied to the question of time, the regime of time, its ever-greater materiality and oppressiveness. The continuity of history—and time—is imposed and alienating. Time is more than a medium; like technology, it is far from neutral.

In the 1980s I came upon a passage in Walter Benjamin's "Theses on the Philosophy of History," and was immediately intrigued by this now well-known piece. It is his meditation on a 1920 painting by Paul Klee, "Angelus Novus":

Where we perceive a chain of events, he sees one single catastrophe which keeps piling wreckage upon wreckage and hurls it in front of his feet. The angel would like to stay, awaken the dead, and make whole what has been smashed. But a storm is blowing from Paradise; it has got caught in his wings with such violence that the angel can no longer close them. This storm irresistibly propels him into

the future to which his back is turned, while the pile of debris before him grows skyward. This storm is what we call progress.

—Walter Benjamin, *Theses on the Philosophy of History* (1940)

Benjamin's interpretation of Klee's angel seems to me profoundly insightful. The storm blowing from Paradise is time, which becomes history and progress. The pile of debris is the course of civilization, growing skyward.

Of course there is a need for historical awareness; but Benjamin points us further. A messianic dimension is needed if history is to be redeemed, if a part of the happiness our ancestors could not have is to be validated. To "awaken the dead, and make whole what has been smashed." To unmask the paradigm of history and its fundamentally legitimating enterprise.

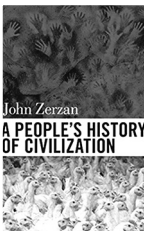
Outside the symbolic system, beyond representation; what Lacan calls the encounter with the Real. Time and history ceaselessly advance all-encompassing domination; so a rupture, a break is needed. Only then could humanity realize a past, citable in all its lived moments, un-reified.

This vision is the opposite of Hegel's totalizing notion of history as the process by which the principle of freedom actualizes itself. Breaking the spell in a frankly apocalyptic way is Benjamin's counter-offer. A glimpse of this was presented in 1830, when radicals fired at clock towers.

Benjamin provides a striking contrast with the promise of historical advancement:

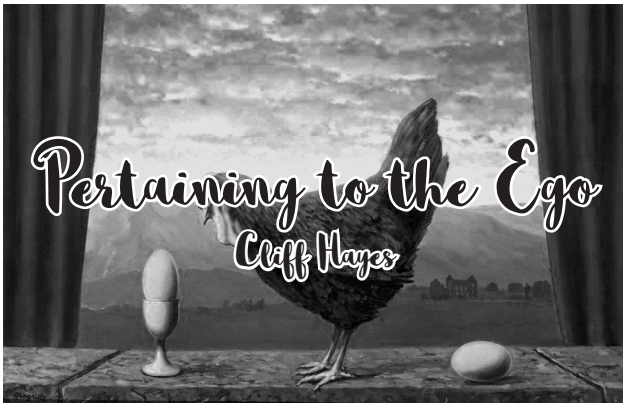
Marx says that revolutions are the locomotive of world history. But perhaps it is quite otherwise. Perhaps revolutions are [or should be] an attempt by passengers on this train—namely, the human race—to activate the emergency brake.

The brake is a break with history. We were conscripted into history and we must make our exit from it.



The People's History of Civilization is a new collection of John's essays tracing the history of civilization and its impacts.

Coming out in January 2018 via Feral House.



Stirner:

“Where the world comes in my way – and it comes in my way everywhere – I consume it to quiet the hunger of my egoism. For me you are nothing but – my food, even as I too am fed upon and turned to use by you. We have only one relation to each other, that of usability, of utility, of use. We owe each other nothing, for what I seem to owe you, I owe at most to myself. If I show you a cheery air in order to cheer you likewise, then your cheeriness is of consequence to me, and my air serves my wish; to a thousand others, whom I do not aim to cheer, I do not show it.”¹

Marx:

“No one can do anything without at the same time doing it for the sake of one or other of his needs and for the sake of the organ of this need — for Stirner this means that this need and its organ are made into a master over him, just as earlier he made the means for satisfying a need... into a master over him. Stirner cannot eat without at the same time eating for the sake of his stomach. If the worldly conditions prevent him from satisfying his stomach, then his stomach becomes a master over him, the desire to eat becomes a fixed desire, and the thought of eating becomes a fixed idea — which at the same time gives him an example of the influence of world conditions in fixing his desires and ideas.”²

The Onion:

“Alarmed at the aisles and seats all but devoid of female commuters,

subway masturbator Doug Waters told reporters Wednesday that the Day Without A Woman strike served as a sobering reality check. ‘It never even occurred to me that this strike would have such an impact on my ability to discreetly pleasure myself during rush hour,’ said Waters, adding he was suddenly forced to take stock of just how much he depended on women when rubbing his genitals beneath a jacket on his lap. ‘I see now that I’ve taken for granted the women I masturbate to each and every day, and it’s time I started appreciating what they do for me. I always knew I needed them—I just had no idea how much.’ At press time, Waters was touching himself with a new sense of gratitude while looking at the model in a small display ad for a technical college.”³

Analysis:

If Stirner’s ego is anything real, it is a “union of organs” physically located within his corporeal body and for Stirner his “Ego Food” is primary. His ego is reliant on it. His ego requires something to feed it. His ego does not sustain the organs of his body, but it is conversely those bodily organs that provide him with the ability to create his ego out of “nothing”. While Stirner might choose to experience his life through the vessel of his created ego, this act of creation doesn’t sustain his life. What sustains his life is outside the created concept of his ego. What sustains his life is his ego’s physical food and like all living things, deprived of its food, it eventually dies. So primarily the ego should act in a way to preserve its food, and acting in such a way might just unveil the “spook” inherent in egoism.

The fact that Stirner died as a result of being stung on the neck by a winged insect only serves to reinforce the pretentiousness of his egoistic navel-gazing.

Endnotes:

1 Max Stirner, *The Ego and His Own* (New York: Benj. R. Tucker, 1907), pp.394-395

2 Karl Max with Friedrich Engels, *The German Ideology* (Amherst, New York, Prometheus Books, 1998), pp.272-273

3 <http://www.theonion.com/article/womens-strike-sobering-reality-check-subway-mastur-55481>

Once upon a time, with Max Stirner.

Stirner:

“Let us not seek the most comprehensive commune, ‘human society’, but let us seek in others only means and organs which we may use as our property! As we do not see our equals in the tree, the beast, so the presupposition that others are *not equals* springs from a hypocrisy. No one is *my equal*, but I regard him, equally with all other beings, as my property.”



“*Stinging insect*”:

stings Stirner

Stirner:
Dead.



The end.



As soon as books on the many variations of the “Paleo” diet hit the shelves, “Paleo” erupted on the market as a new term, a new commodity. Gurus arose, bringing brands and products with them. All the while, the product-based discourse quickly faded from anything actually related to the Paleolithic.

Enter Nora Gedgaudas.

Nora is no new face within the Paleo spectrum by any stretch and she brings a number of qualifications in tow as a Nutritional Therapy Practitioner/Certified Nutritional Therapist (NTP/CNT), NANP Board-Certified in Holistic Nutrition (BCHN)/consultant and a Board-Certified clinical Neurofeedback Specialist (CNS). She’s also pretty badass. When the earliest version of her book, *Primal Body, Primal Mind* (Inner Traditions, 2011), first came out in 2009, it had far more than any savvy marketable diet trends offered; it brought the conversation back to its basics: how did evolution shape the way our mind and body function in an optimal sense. Even more important for us: what impacts has civilization had on us.

Informed by both a respect for the life of hunter-gatherers and our hunter-gatherer biology, Nora’s work is a direct affront to not only the Standard American Diet, but to the values we’ve had instilled within us as a civilization that wrecks our guts and makes our minds more malleable to being complacent consumers inundated with a toxic environment. Her newest book, *Primal Fat Burner* (Atria Books, 2017), is a solid crash course for those looking to restore some semblance of our primordial health and wellness in a crazy world.

Thorough and unrelenting, it’s great to have Nora on our side. Thanks Nora!

- Kevin Tucker

You recently might have coined the term Primalgenic™ in response to the rapidly increasing and saturated market of relative concepts. We’re talking largely about Primal, Paleo, Low-carb, and Ketogenic diets, which, as you point out, tend to be loosely structured around a core of

“approved foods” and then work backwards from there. At that point things can really go crazy and can quickly degrade into things like Paleo-branded junk foods, which clearly misses the point. Can you give a brief overview of what your “Primalgenic™” approach focuses on and why?

The term “Paleo” technically refers to a way of eating that is based upon the kinds of foods that would have been available to our prehistoric ancestors. It is predicated on the idea that the most consistently available dietary inclusions throughout our evolutionary history would have logically served to shape our physiological makeup and our most fundamental nutritional requirements. We know from the consistent stable isotopic data surrounding prehistoric hominin and human remains, as well as other evidence from more recent known hunter-gatherer populations around the world that the “diseases of Western civilization” were conspicuously absent from these people groups. The work of certain nutritional pioneers, such as Dr. Weston A. Price further confirmed/documentated the robust health and distinct lack of physical or mental affliction in both hunter-gatherer and several more traditional people groups eating the diet of their ancestors. It’s certainly a rational hypothesis and to me the only rational **starting place** when making a determination of what the “optimal” human diet should consist of. And to me the operative words here are **starting place**.

In the early days (back in about 2009, around the time the self-published version of my first book, *Primal Body, Primal Mind*, came out), the so-called “Paleo (dietary) movement” consisted of a small handful of passionate researchers and authors, and the **Ancestral Health Society** was forged as a means of bringing this group together on an annual basis to share the most current research and academic information surrounding various aspects of the subject matter. –All fine and good. Except that the popularity of the premise behind all of this (or the perceived premise) has taken off in no small way in the general population and—as is inevitable—commercialized aspects of industry have begun to take notice and has increasingly sought to co-opt the popular genre for its own gains. I predicted the full-fledged commercialization of “the (so-called) Paleo diet” as early as 2010 and have been sitting back ever since and watching this very thing unfold. What began as an honest and soundly based underlying concept has mushroomed into a boom of “anything goes as long as it’s (seemingly...or purportedly) natural”—including a ridiculous array

of prepackaged foods, condiments and a plethora of “Paleo dessert” books. Many popular Paleo book authors and bloggers gear their writing toward marketing, which doesn’t help, and it simply clouds the subject matter with endlessly conflicting opinions and effluvia based on either wishful thinking, nutritional politics, personality cults and clashing egos. It’s disconcerting, to say the least.

To be fair, the same thing tends to typically happen with almost any idea that takes hold in our society.

In any case, even from the beginning I knew that simply basing the idea of an optimal human diet on whatever our ancestors were able to pick up and put in their mouths needed better clarification. This is why the subtitle of my first book read, “***Beyond the Paleo Diet for Total Health and a Longer Life.***”

One of the biggest problems when it comes to talking about the term “Paleo,” much less “ketogenic,” involves the clear lack of definitions regarding what is specifically meant by these terms. Too often, this is overgeneralized. If I could remove any single word from the headlines concerning either one of these two dietary approaches it would be the word “THE.” There really is no such thing as “the” Paleo diet or “the” ketogenic diet. I can tell you from considerable experience as someone operating from the forefront of what has been called “**the** Paleo movement” for the last six or seven years now that there are almost as many definitions of “Paleo” out there as there are individuals claiming to practice it. The field unfortunately lacks a cohesive underlying definition that might better reign-in its fragmentation.

A few of the self-confessed carbophiles (claiming the Paleo moniker) even insist upon promoting the consumption of blatantly post-agricultural foods such as rice, legumes, dairy products and starchy potatoes. I have even heard of “the” Paleo diet consisting of tofu, fruits and vegetables, as publicized at one point by Dr. Oz. And today the marketplace is getting clogged with various types of cardboard and cellophane packaging with cavemen stamped on the label as a seal of “Paleo-friendly” approval. It’s all over the place.

By the way, I personally elected to adopt the term ‘Primal’ well over a decade ago as a way of hinting at the much older, more foundational (even primordial) origins of our essential makeup (and as a way of distancing from the more fat-phobic and lean meat-gorging approaches being popularized via the term “Paleo” at the time). Others in the genre have since adopted the term, “Primal,” as well, for their own reasons (likely having nothing to do with mine). In other words, there is no agreed upon definition or official distinction be-

tween the terms “primal” and “paleo.” Just FYI.

I am very careful about my definitions when I talk about my approach to things and what my research and 20-years of clinical experience has shown me. That is why I more recently felt the need to coin my own term, ‘**Primalgenic™**,’ as a means of distancing myself from all the baggage associated with what is now a collection of highly commercialized genres and clarifying my own carefully cultivated position.

I have come to the well supported conclusion that dietary fat—including, if not especially dietary animal fat, it’s fat-soluble nutrients, and a fat-based metabolism (as opposed to a modern day sugar/glucose-based metabolism) relying on free fatty acids and ketones is in fact not only central to human health, but also central to the very thing that made us human in the first place.

Here is what the principles I call ‘**Primalgenic™**’ consist of:

1. First and foremost: a diet focused on foods of **uncompromising dietary quality** in alignment with out human evolutionary and genetic heritage. (i.e., 100% organic, grass-fed-and-finished and/or wild meats, free of GMO’s, pesticides, herbicides, etc.)
2. Minimizing all foods containing significant sugars/starch (including fruits, “natural” sugars such as honey, coconut sugar, maple syrup, agave, etc. and starchy vegetables –as well as all refined forms of carbohydrates (or so-called “carb substitutes”).
3. The consumption of only *moderate* amounts of protein (sufficient to meet but not exceed basic daily physiological requirements for maintenance/rebuilding/regeneration of tissues. This is NOT a high protein/high meat diet!).
4. High % of **dietary fat** in terms of overall **caloric** intake, where both animal fats (including essential fatty acids [EFAs], other beneficial fat-soluble nutrients such as CLA, etc. and fat soluble nutrients –A/retinol, K2 and D3—dominate). Also welcome are traditional fats such as organic olive, avocado, macadamia nut and coconut oils (maybe a little sesame oil), and naturally occurring fats associated

with quality meats/organs (again, all of uncompromising quality).

5. Acknowledges that fat is naturally meant to be our primary source of fuel (in the form of free fatty acids and ketones) and that glucose instead is meant to serve an auxiliary/secondary role.
6. Recommends the consumption of a large variety of fibrous (non-glycemic) vegetables and greens, prepared raw, lightly cooked, cultured, etc. as a person might desire (or tolerate) for added bulk, antioxidants/phytonutrients/detox support and healthy gut microbiome fodder (nuts and seeds may be also included as tolerated).
7. Is aligned with foundational principles supplied through human longevity research science—minimizing both the need for insulin and mTOR (a metabolic, protein-sensing pathway) for better health optimization using aforementioned ancestral principles.
8. Takes into account the uniquely challenging world we live in today (which at times may lead to the need for additional support through targeted supplementation).
9. Rationally assumes that we, as human beings, are much more alike than unlike in our fundamental design and that we have a shared foundational physiological makeup that readily defines us as a species, and that there is not a separate textbook of anatomy and physiology for every person alive.
10. “Bioindividuality” is readily acknowledged but seen and treated as nuance, rather than a source of *foundational* differences.
11. Is 100% gluten, grain, legume/soy and (provisionally) dairy free.
12. Automatically acknowledges the growing prevalence of food and environmental sensitivities, as well as autoim-

mune disorders and encourages appropriate testing and precautionary steps.

13. Is automatically committed to principles of health optimization and environmental sustainability, focused on unadulterated and humane food production and the restoration of ecosystem health and diversity and healthy land management via Holistic Management principles (a la the



Savory Institute).

How did you arrive at this conclusion?

In part, I spent countless hours asking myself the question: “Just because our ancestors did something is that a good enough reason for us to do the same thing now? *How would we know?*”

Our ancestors were not necessarily eating in a conscious effort to live a long and healthy, post-reproductive life. Although their lives were nowhere near as nasty, brutish and short as commonly portrayed, they did frequently live in climatically or environmentally hostile environments. Infant mortality, accident and infection were the primary causes of death, which makes a comparison of human longevity then and now more or less a relative comparison of the hostility of modern vs prehistoric environments. Interestingly, we lost literally half of our average expected human life span in the early days of adopting agriculture and until the latter 18th century nobody lived longer than about 25 years old. So this whole idea that “cavemen died by the time they were 40” is in part a misleading assumption based on average (infant) mortality rates and living conditions. There is also a widespread assumption that agricultural implementation improved out health and longevity somehow, which it most certainly did not.

The Paleolithic era was marked by extreme periods of Ice Age that rendered whole portions of the northern hemisphere frigidly inhospitable, and left Africa convulsing in drought and wildfires. Wide-

spread volcanic activity and a variety of cataclysmic events hurtling at us from the cosmos made for challenging survival conditions globally, at times. The fact is we essentially became human by surviving disasters. Dietary fat to our primitive human physiology has literally come to mean ‘survival’... And when it comes to the natural world and our body’s metabolic priorities, survival literally trumps everything else.

Can you give a brief run through of how the human body reacts to carbohydrate-based diets?

A carbohydrate-based diet is purely an artifact of our post-agricultural, and increasingly modern day industrial life. Prior to the development of agriculture, utilizable carbohydrates were far less available to us in any meaningful way. And we are demonstrably ill-suited to depending on them as a primary source of fuel and/or nourishment.

The more we cultivate a dependence upon glucose by eating a high carbohydrate (sugar/starch) diet, the more tissue glycation (damage), inflammation and free radical activity we experience. Dietary carbohydrates lead to an increased requirement for insulin, which in turn invariably leads to enhanced insulin resistance with age, cognitive decline and a potentially shortened life span.

Interestingly, of the three major macronutrients—proteins, fats and carbohydrates—the only ones for which there are no scientifically established human dietary requirement are carbohydrates—not in any medical textbook or textbook of human physiology. We are able to manufacture all the glucose we require from a combination of protein and fat in the diet, and our bodies are actually better suited to running on fat full-time, both in the form of free fatty acids and also something called *ketones* (water-soluble energy units of fat produced by the liver from free fatty acids). In fact, only humans (and particularly our human **brains**) have evolved the capacity to make a full-time use of ketones as a primary source of ongoing fuel. And not only can our brains rely on ketones, but our brains actually run better on them than unreliable, unstable, damaging, glycating glucose. This clearly speaks to the obvious importance of this uniquely human adaptation.

There’s a lot of discussion about what constitutes a “true Paleolithic diet,” a discussion that can easily turn by fantastically overstated news items from time to time. There’s two points I’d like to touch on about that.

The first is that (as far as I’m aware) no one is saying that Paleo-

lithic hunter-gatherers never consumed high-carbohydrate foodstuff like grains, but that the human body and mind evolved to function primarily as fat-burners. Being resilient allows us to burn sugar as well, but a high-carb diet was never the predominant, year-round ancestral choice. Grains, many of which require a lot of processing to become edible, were largely considered back-up food sources.

The question then is what does it mean to have evolved as hunter-scavengers?

It means that we are extremely well designed to rely on a foundational diet based upon animal source foods. We know that even all great apes, with the exception of one, regularly eat meat. A chimp (supposedly our closest primate cousin) derives anywhere from 2 to 13% of its calories from the meat of typically small animals that chimps literally hunt. –The exception here is herbivorous gorillas (a bit of an outlier on the primate family tree), having a much smaller brain to body ratio than would be expected for its size. In fact, a gorilla weighing about the same as a human has a brain just one third of the size.¹²

Chimps have a brain size ranging anywhere from 275 cm³ to no more than 500 cm³; and, unlike ours, the chimpanzee's brain hasn't really actually changed at all in seven million years. So what's up with that?

Well, for one thing, chimps haven't really changed their diets or lifestyle habits in all those years. They stuck to whatever of their comfortable habitats they could find and kept noshing on those bananas.

But somewhere in there we had a slightly more intrepid primate cousin that decided to try something different...

Somewhere along the way, during a period of dramatic climate change, one of these intrepid knuckle-dragging relatives of ours swung down from the trees and emerged onto the vast African savanna and then it did something remarkable: **it stood up on two legs**—which in turn freed up their hands with developing opposable thumbs and opened up an entirely new world of evolutionary possibility for this curious and irrepressibly determined evolving new species of primate...known as **the hominid** (or hominin, as it is more properly referred to today).

We traded leaves and bananas for scavenging carcasses and eventually learning to hunt and kill increasingly larger — and fattier — prey. Fat helped us survive longer between meals, which added to our survival advantage. We developed a very real taste for fat early on. Even Lucy (the female skeletal remains of among the earliest hominins ever

discovered—*Australopithicus afarensis*) already had figured out how to use **stone tools** to cleave both meat **and marrow** from the carcasses of animals for nourishment three-and-a-half million years ago. We have done this from the very beginning of our foray into this strange and more challenging new habitat on two legs.

Our earliest hominin ancestor of the genus, Homo—*Homo erectus* had an estimated 900 cm³ brain 1.8 to 2 million years ago (already almost double that of the smartest chimp). By this time the anthropological evidence shows that we already were reliant on a full-time hunting economy as a species. From there we radically increased our brain size to about 1500 cm³ to become *Homo sapiens* 200,000 years ago in that relatively brief span of evolutionary time. This enormous degree of brain expansion—or encephalization, as it is called—and the speed at which it occurred is wholly unprecedented in all of nature. Our average brain capacity peaked as Cro-Magnon humans living in Ice Age Europe roughly 20,000 years ago, where we averaged our largest ever (1550 cm³) cranial capacity.

Here's something else we know: our human colon makes up only about 20% of our G.I. tract—which overall is just over half of what might be expected in a typical primate of similar size. Chimps have a colon that makes of a whopping 52% of its total gut volume. –It's basically a great big fermentation vat. Now here's the kicker—despite a chimp's greater inherent capacity for digesting carbohydrate foods, *less than half of their actual caloric energy intake is actually derived from carbohydrates (glucose)*. Even a chimp derives more than 50% of its actual calories from fat—more specifically, a short chain **saturated** fat called *butyric acid* (and also propionic and acetic acid). They get these saturated fat calories from the **bacterial fermentation** of all that fiber they consume. That's why they seem to have such big guts. By the way, **the same is true of all ruminants and other herbivores, calorie wise**. Cows gets up to 70% of their daily caloric intake from short-chain saturated fats, and not carbohydrates (even as they are literally designed to obligately consume them). It turns out that all large mammals are basically designed to get their primary caloric intake from fat! –Only as humans, we are by far designed to get the most... And our brain in particular can easily run on fat full time, too (in the form of ketones). We are designed to get our caloric fats directly from animals we consume that have already synthesized a much greater variety of beneficial fats for us, including especially those that we uniquely require for our highly unique brand of cognition.

The human digestive tract in comparison to even our closest great ape relatives is radically different. For one thing, ours is a primarily hydrochloric acid-based and not primarily fermentative based (as is the case in herbivores), and we are far better geared at eating diverse and abundant sources of fat and not having to rely on laboriously synthesizing it internally the way herbivores do. We also evolved an ability to absorb (and developed a physiological preference for) *heme*-sources of iron (something herbivores are incapable of metabolizing).

The ‘Expensive Tissue Hypothesis’ advanced by Dr. Leslie Aiello, professor emeritus at University College London, way back in 1994 is not a fringe concept and is in fact widely accepted today within the field of paleoanthropology. It is predicated on the idea that we needed to trade our energetically expensive growing brain for our gut size along the way. The human brain makes up only perhaps 2 to 5% of our total body weight, but it literally utilizes 25% or more of our total caloric energy demands as adults. In an infant this number may be as high as 85%, and in young children 45 to 50%. By contrast, a chimp’s brain utilizes no more than about 8% of its total caloric energy intake. This makes our unique brain *extremely* expensive with respect to its energy demands. As aptly summarized by Neil J. Mann, BASC, BSc, DiEd, PhD, anthropologist at RMIT University in Melbourne, Australia, “The gut is the only organ which can vary in size sufficiently to offset the metabolic cost of the larger brain. Diets high in bulky food of low digestibility require relatively enlarged that size with fallenness fermenting chambers (rumen and cecum). Diets consisting of high quality foods are associated with relatively small gut size: with simple stomachs, reduced colon but proportionately long small intestine as seen in carnivores.” In another publication, Dr. Mann points out that “Despite negative press reports on the effect of meat and other animal source foods (ASF’s) on human health in a vocal minority who contend that humans evolved as vegetarians, scientific evidence contradicts these views. For several million years before the development of agriculture, our ancestors were heavily reliant on animal source foods as a source of energy in critical substrates such as protein in long chain omega-3 fatty acids. Numerous lines of evidence in the anthropological literature have confirmed the scenario. Studies of animal source food composition and clinical trials on animal source food consumption have provided clear evidence of a requirement for meat in the diet to provide nutrients essential to health, such as vitamin B12, long chain omega-3 fatty acids and bioavailable sources of

iron and zinc.” Also, when it comes the plant-based foods, “the high energy/time spent in collection and preparation of such plant foods, particularly seed grains, is not well rewarded in terms of energy gain; hence these are not feasible as a primary energy source.” (FYI, all of this and much more information and quality scientific evidence is exhaustively footnoted in my newest book, *Primal Fat Burner*).

Even though there were a lot of things we were able to put in our mouths in an effort to survive or stave off hunger, that doesn’t mean that all of it was healthy, much less optimal for our ancestors—and it certainly doesn’t make it all optimal for us, either.

This actually makes me a bit of an outlier in the popularized “Paleo diet genre.” The popular mantra of “Just eat real food” isn’t good enough for me. I am not persuaded that all we need to do is eat everything that looks seemingly “natural,” or even everything our ancestors ate to be optimally healthy. There really is no rational basis for these blanket assumptions. That said, it does stand to reason that those foods that would have been *most predominantly and consistently available to us* throughout our evolutionary history would absolutely be those foods to which we were the most strongly adapted, and these foods would also have served to shape our physiological makeup and our most fundamental nutritional requirements.

In poring through the reams stable isotopic data (accurately revealing what our ancestors ate throughout innumerable periods of our evolutionary history) supplied through the Max Planck Institute four Evolutionary Anthropology in Leipzig, Germany, it is abundantly clear that animal source foods have been foundational to our diet as hominids from the very beginning, and there is literally zero evidence to suggest that plant-based foods provided any meaningful caloric or developmental impetus for our survival or evolution. Plant foods supply us with zero structural components for our brain and nervous system and none of the essential fatty acids required for human cognition. We certainly consumed them, but we lack the fermentative digestive capacity to make full use of all the nutrients they contain.

All this said, to me, this prehistoric ancestral dietary view is the only rational starting place we have... But it is just that, a starting place. Therefore, I have hybridized this ancestral research and these foundational concepts with principles of human longevity science. What has emerged is a carefully determined approach based on these hybridized areas of quality evidence (while also taking into account the world we live in today). It’s what I write about extensively in *Pri-*

mal Body, Primal Mind and Primal Fat Burner.

I am not at all opposed to including a wide variety of plant-based foods into our daily diets. In fact, I do actually think that fibrous vegetables and greens likely have an even more important role to play for us today (in our toxic world) than ever before—by their virtue of supplying us with diverse and beneficial phytonutrients, as well as antioxidants, detoxification support, and the fodder they provide for our ever-increasingly embattled gastrointestinal microbiome. They are certainly potentially helpful when well tolerated, but they have never been established by science as essential (no carbohydrate ever has).

As an emerging hominin species we developed a uniquely voracious appetite for dietary fat. As already aforementioned, the two fatty acids most strongly associated with our unique human cognition include (20- and 22- carbon chain fats) both arachidonic acid and DHA—both found exclusively within the diet of humans within animal source foods. And if DHA isn't in your diet, it isn't in your brain, either. The same may also be true of arachidonic acid (which is supposed to make up at least 11% of your brain's key fatty acids). As humans, we are also literally born in a state of effective metabolic ketosis, where ketones (and NOT lactose) become THE major fuel for brain development.³



A Gwich'in hunter splits the heart of a moose for drying. In the background, intestinal fat to be used for soup hangs in a tree. Photo by Four Legged Human.

Metabolic researchers, George Cahill, MD and Richard Veech, PhD, MD have aptly pointed out that “Without this metabolic adaptation, *H. sapiens* could not have evolved such a large brain.”⁴

The follow up to that is one of your most important points: we're not just talking about an optimal human diet, but the importance of health and lifestyles in a civilized world. One that is full of toxins, distractions, depression-inducing disconnect, a fractured sense of community that leaves us more vulnerable to isolation and trauma, being stuck in a constant cloud of EMFs, walking and living on concrete, really just everything. In this sense, we're not just trying to recreate an accurate reflection of what hunter-gatherers might have eaten in various regions, but a combination of that with giving our minds and bodies a better chance at healing and functioning in an insane hyper-technological reality.

Can you elaborate on that?

I actually believe that we are living in easily the most uniquely hostile and challenging period of our entire evolutionary history.

The irony of this is that we have also never been more complacent than we are today. Additionally, we have never been more far-removed from the natural environment that sustains us, or more removed in many ways from the natural cycle of life of which we are invariably a part.

The reason for this modern-day state of mass complacency (apart from mind-numbing media influence) lies with the fact that most of what threatens us today is largely invisible: The misanthropic and sociopathic inclinations of multinational corporate interests, severe contamination and compromise of our air, water and food supplies, unprecedented inflammatory dietary and environmental elements, other forms of immune compromise, super-bugs, depleted soils, an industrialized food supply devoid of nutrients and completely foreign to our human evolutionary and genetic design, GMOs, glyphosate, questionable nanotechnologies, the hidden side effects and toxicities inherent in all pharmaceuticals and vaccines, radiation contamination, EMF pollution, and more. In light of this Orwellian nightmare I would almost favor being chased by a sabertooth cat instead, almost any day of the week. –At least the toothy feline threat is tangible and straightforward.

That said, our nervous systems have additionally become unnaturally wired for fight or flight on an ongoing basis, leading to poor frontal lobe activation, poor judgment and a tendency toward knee-jerk, emotional reactivity. Our diets are part-and-parcel of this (and CNN plus a beleaguered economy clearly doesn't help). It is all a pathological hallmark of the polarized and increasingly fragmented

and irrational society we live in, and something we are in desperate need of addressing if we are to have any hope the surviving this time period as a species.

By the way, most people relying on carbohydrates as a primary source of fuel aren't more than two missed meals away from a state of mental and metabolic chaos. Just think of how you (as a sugar burner) might feel if you haven't eaten anything for even just 5-6 hours (much less 5-6 days). And how clear-thinking, energetic or emotionally stable do you imagine you might feel? Conversely, a well adapted fat-burner can literally go for days or even weeks with steady energy, emotional stability and a clear head. Obviously, this is a survival mechanism that has the potential to serve us incredibly well—and so it has for roughly 2.6 million years!

Also, our still wild human psychology that is naturally geared for feast or famine is for the first time vulnerable to what seems to be an unnatural abundance of largely unnatural foods (and food-like substances) that we seem to have an unlimited and unrestrained access to. We lack a natural shut-off switch, especially when it comes to sugary and starchy carbohydrates (which also trigger our addictive opiate centers). No one in our industrialized society today needs to take more than about two steps in any direction to be able to reach something they can put in their mouths and call food. Food is in fact no longer treated as an important source of nourishment, but instead as a largely nutrient devoid source of entertainment. Convenience seems to trump food quality.

None of this is sustainable.

The number one source of bankruptcy in the United States right now is a bad diagnosis. The World Health Organization also tells us that cancer rates are expected to increase more than 70% over the coming 20 years. Autoimmunity is easily the greatest, fastest growing and least acknowledged health burden in the world—with more than 100 currently identified autoimmune diseases and an additional 40 that are thought to have an autoimmune component. No one has the wiggle room for indulgence they think they do anymore. For the first time in recorded history children are not expected to live as long as their parents. Age 30 is the new 45 when it comes to the onset of age-related diseases. The 2013 Global Burden of Disease study (published in the *Lancet* in 2015) tells us that over 95% of the world's population today suffers some manner of health related issue, with over a third of the global population having more than five ailments.⁵

And yet we remain oddly complacent, comfortably nestled onto

our living room couches and watching Netflix with a big bowl of popcorn on our laps in our comfy, climate controlled environments. We are like those proverbial “boiling frogs”— gradually being cooked to death in our own skin while all the while convinced we are sitting in a hot tub in Las Vegas somewhere. We all need a bit of waking up.

Can you talk a little bit about how emotional and environmental stress coupled with a modern diet impact brain function?

As I mentioned previously, we are actually designed to operate in a calm, parasympathetic autonomic nervous system state at least 99.99% of the time, with only very brief and punctuated exposure to sympathetic dominance (i.e., “fight-or-flight”) ... Such as when (say) a sabertooth tiger jumps out from behind a bush and chases us around. If we are fortunate enough to outrun and outlive such an apparent threat, our nervous system is then later designed to slide comfortably right back into its metaphorical state of relaxing on a white sandy beach somewhere with the proverbial umbrella drink again. But instead, the opposite has become the unnatural norm. We are all metaphorically being chased around by sabertooth tigers 24-7. If we are even fortunate enough to actually get this fabled thing called a “vacation” once in a blue moon, we may travel to a place like Tahiti just long enough to stress out the Tahitians, then find ourselves returning back to our chronic state of self abuse again. Nothing about this is natural to our species.

The area of the human brain designed to mitigate our stress response—the hippocampus (a part of your temporal lobes, located just above your ears on either side of your head)—carries the richest repository of cortisol receptors anywhere in the brain. That said, this delicate area of our brain was never meant to be marinated in cortisol 24-7. Cortisol is a catabolic hormone—in other words, it tends to break things down. Prolonged exposure of cortisol to these delicate hippocampal cells invariably results in their deterioration. This is referred to as a *neurodegenerative process*. It’s well worth pointing out that this is also the first area of the brain typically exhibiting pathophysiological changes and shrinkage in Alzheimer’s disease and dementias. A diet reliant on glucose as a primary source of fuel similarly drives up both cortisol (plus more blood sugar) and insulin in an alternating fashion, leading to reactive hypoglycemic symptoms, chronic inflammation, surges of sympathetic overdrive, agitation and frequent anxiety, unhealthy sugar/stimulant cravings, neurodegener-

ative changes and premature aging. It becomes a vicious cycle. NOT good. Increasingly, radiologists are looking at the brains of young people using brain scans and noting an increasingly “Swiss cheese” appearance of the hippocampus in ever younger populations. They are beginning to call (a.k.a., rationalize) this as “a normal variant of aging.” I’m here to tell you that there is “nothing” normal about this simply because it has become increasingly common.

The origins of civilization lie with hunter-gatherers settling around wild grains and storing the surplus, which turned towards domestication and agriculture. How quickly did this change in dietary preferences start to impact human health?

By 11,600 years ago we had been evolving as nearly pure meat and fat eaters for over 100,000 **generations or more**—then everything suddenly, unexpectedly, and cataclysmically changed. The vast ice sheets (thousands of feet thick) that covered most of northern North America and extreme South America suddenly—and perhaps even abruptly—vanished.

Whether it was fragments of a comet (the most currently accepted theory-at-hand, with the most evidence to back it up), or a giant meteor, or something like a magnetic reversal paired with a massive solar flare that caused these ice sheets to melt so quickly (or maybe some combination of these events), it is clear that our world changed abruptly, violently and decisively in what amounted to possibly the single largest extinction-level event since the demise of the dinosaurs. The massive fat-rich megafauna (huge animals like the woolly mammoths, mastodons, aurochs, giant sloths, woolly rhinos and huge numbers of others—over 120 massive species we avidly hunted for nearly 2.6 million years) mostly vanished in the blink of an eye. Suddenly we were faced with a critical survival emergency and a need to adapt to rapidly changing circumstances.

...And being the innovative and enterprising species that we were... we did!

So suddenly we shifted from about a 3-hour workday of a hunter-gatherer to one where we were suddenly busting our backsides working 8+ hours in the fields every day for a far less nutrient dense food to which we were far less adapted. **We clearly suffered poorer health as a result.** This is all extremely well documented (I can also refer your readers to my blog post about Otzi the Iceman here: <http://www.primalbody-primalmind.com/otzi-ice-man/>). A good paleoan-

thropologist can actually look at a set of human remains and automatically tell you whether it was pre-agricultural or post-agricultural person based on the health and robustness of that skeleton (hint: the biggest problems are always seen in the post-agricultural skeletons). Still, this “civilization-thing” allowed us to stay put in larger population centers and gave us greater safety in numbers, along with a storable food supply—but it also gave us things like ruling class hierarchies and nation states with an unprecedented appetite for war. Hey—good deal! This new version of civilization had its trade-offs... and still does.

By the way, once we adopted agriculture our average human life expectancy actually dropped in half compared to the life expectancy of our supposedly short-lived prehistoric ancestors!⁶ And it was there that we began to develop what we now refer to as “the diseases of Western civilization.” It started THERE, at the beginning of the agricultural revolution when carbs became our staple,⁷⁸⁹ and not simply with the Industrial Revolution—though let’s face it, the Industrial Revolution really pushed us down one heck of a slippery slope!

Tubers and honey both played a noteworthy, though varied, role in nomadic hunter-gatherer diets. Naturally access to honey wasn’t as simple as going to the store, but its presence was and is certainly met with excitement and it has also been upheld for medicinal qualities. Likewise, tubers categorically include everything from groundnut to white potatoes, yet they are treated as a group. In Paleo circles, there’s a lot of discussion about these two food groups, but you recommend against them. Can you explain why?

As I previously stated, the fact that we were able to put certain things (like sugars and starches, for instance) in our mouths and seemed to do okay here and there by no means suggests that everything we might have eaten was optimal for our ancestors—or would be in any way optimal for us, either. This is where I have brought human longevity research into the equation. And human longevity research tells us in no uncertain terms that the less insulin we require over the course of our lifetimes the longer we are likely to live and the healthier we are likely to be, by far.

Honey was not something available to all prehistoric people groups all of the time, and was something we typically considered a sporadic treat. And yes, it has some antimicrobial qualities we also would have valued (and still do). That said, all sugars (including so-

called natural sugars) are inherently damaging and metabolically dysregulating. But it's also important to point out that dietary starch was simply not something we were capable of making any dietary use of whatsoever until much more recently in our evolutionary history. Starchy roots and tubers would have required extensive cooking in order to undergo the necessary process of what is called *gelatinization*, which is what allows starches to be utilized for energy at all.

I know that there is a popular cooking hypothesis that suggests that cooking was **the thing** that ultimately made us human. The whole “cooking hypothesis” was basically supposed to be some answer to our human inability to digest and turn large amounts of fiber into energy, as is the case with herbivores, and also our inability to make use of raw starch. The theory also automatically presumes that sugar is meant of necessity to be our primary cognitive fuel. It isn't.

I'll just quote Josh Snodgrass, William Leonard and Marcia Robertson here— three of the most accomplished and respected anthropologists specializing in this question from a paper of theirs back in 2009:

*“Although cooking is clearly an important innovation in hominid evolution that served to increase dietary digestibility and quality, there is very limited evidence for the controlled use of fire by hominids prior to 1.5 Ma. The more widely held view is that the use of fire and cooking did not occur until considerably later in human evolution, probably closer to 200-250,000 years ago, although possibly as early as 400,000 years ago. **In addition, nutritional analyses of wild tubers used by modern foragers suggest that the energy content of these resources is markedly lower than that of animal foods, even after cooking.**”¹⁰ (emphasis added)*

And by the way, a much more recently published paper concerning the development of our controlled use of fire **at will** in 2014, suggests by the collective evidence available that our ability to make full use of fire as a cooking tool was probably **much** more recent—anywhere from 75,000 to 100,000 years ago.¹¹ [Editor's note]

Also, it's worth pointing out that genes that might allow us the capacity to detoxify tuber glycosides and other toxic alkaloids have appeared only much more recently— and **only** among agricultural

* Editor's note: we all universally disagree with this timeline, putting the use of fire by human ancestors back at least 1.7mya. Considering the point is about the role of dietary fat, the disagreement doesn't disqualify Nora's arguments in our opinion.

populations that habitually consume domesticated tubers. Research also reports that our species likely only experienced an increase in copies of starch-digesting amylase genes within the last 200,000 years (and, by the way, we already **had** our big brains by then). Today we humans vary in our amylase digesting capacity pretty widely, and most have a range of anywhere from two copies on up to 16 copies of amylase genes, making starch (yet again) anything but essential to our health as a species (and having more amylase genes, by the way, doesn't mean having a bigger brain, either). According to a study in the journal *Nature Genetics* in 2007, the adaptation to significant starch consumption was likely not within our capacity during the Middle Pleistocene and is not even present in many low starch consuming populations today. In fact, following our implementation of agriculture roughly 10,000 years ago, with ever increasing quantities of dietary carbohydrate for the first time in our evolutionary history, we have concomitantly suffered a **loss** of just over 10% of our total brain volume in the same time period (roughly equivalent to the size of a tennis ball).¹² – Let's just say that evolution isn't moving along in the direction we like to think it is, or as popularly advertised. Declining dietary B12 levels are also likely contributing to this growing shrinking problem (pun intended).

Also, various nitrogen isotope studies also confirm pretty low plant consumption in even the late Paleolithic era, even though cooking was already well established by then. And cooking may or may not have made animal protein more digestible (there is a whole debate about that).

In any case, by 200,000 years ago our brains were already fully modern, **if not even a bit larger** than they are now. **And we never needed cooking in order to reliably make use of dietary fat.**

Cooking or fire didn't make us human, and neither did starchy grains or potatoes. Dietary fat did.

And (some things bear repeating) the two forms of fat that are most strongly associated with our unique human cognition—the 20-and 22-carbon, fats, DHA (docosahexaenoid acid) and AA (arachidonic acid)—are both exclusively found within our food supply within animal source foods.

In Primal Body, Primal Mind and elsewhere you talk about being “stuck in survival mode” in Modern society. The combination of being over-stimulated and over-aroused into a fight-or-flight situation capable of shutting down our own “humanness.” It's easy to have this dis-

cussion boil down to just diets and that makes it easier to see it as fads. How much does diet play into all of this and what are people missing if they think it just comes down to what you eat?

I described most of this answering a previous question here, but what is clear is that a dietary/metabolic dependence on carbohydrates (glucose) as a primary, ongoing source of fuel is a recipe for neurological and mood instability, neuroinflammation, emotional reactivity and pathophysiological changes in areas of the brain associated with Alzheimer's and dementia as we age (even in those having seemingly higher end normal, non-diabetic fasting blood sugar). The neuro-inflammatory response in the brain triggered by insulin/blood sugar surges and the consumption of dietary contaminants such as gluten and other damaging, foreign, lectin-rich post-agricultural foods to which we are poorly adapted as a species have a tendency to additionally (via neuroinflammation) thwart circulatory perfusion to the frontal lobes of our brains (while damaging the hippocampi). This results in poor metabolic and functional access to what is known as our brain's "executive function"—our frontal lobes—the part of our brain more than any other that seems to characterize our humanness.

We need our frontal lobes in order to exercise good judgment, thoughtfulness, the ability to extrapolate from the past and consider future consequences (and tolerate delayed gratification), to be able to effectively exercise short-term memory, for focus and attention to more detail of what is happening around us. We also need this part of our brain in order to more healthfully manage our emotional states and keep impulsive behavior and emotional reactivity in check. These are all the qualities most lacking in our modern day society at large, and the qualities we most desperately need in order to most effectively address the unprecedented problems and challenges we face as a society and planet.

It is interesting, if not critical, to point out that a quality fat-based ketogenic approach to eating is able to enhance cerebral circulation by a whopping 39%—owing to its profoundly anti-inflammatory and free radical-dampening effects. As pointed out by Dr. Richard Veach PhD, MD, National Institutes of Health lab chief and decades-long metabolic expert (and I'm paraphrasing here), ketosis is effectively the natural metabolic state of humankind.

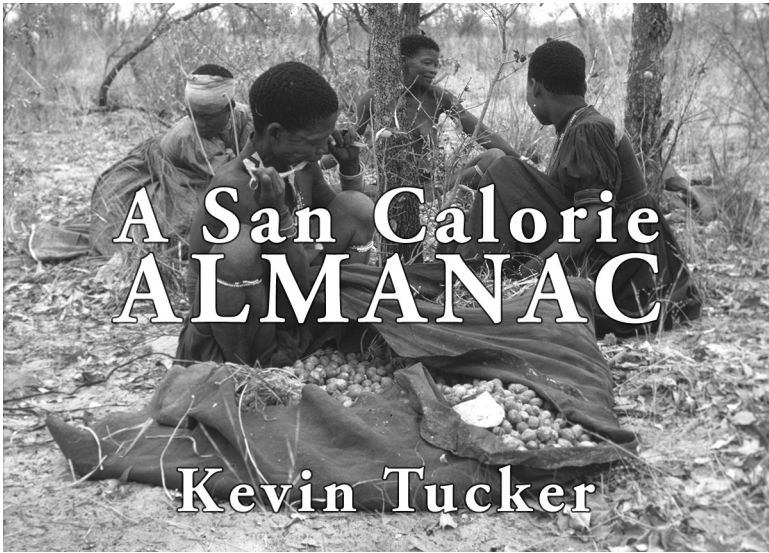
I am not opposed to the rich and varied consumption of quality, non-glycemic, fibrous plant-based foods. In fact, my dinner plate appears to be dominated by them. But if you look closely enough you

will see small amounts of extremely high quality meat (including some organs meats), and the glisten of a variety of animal and certain traditional plant-based fats (also of uncompromising quality). A caloric analysis would show fat **calories** as dominating the plate, even as it might not be overly visible (this isn't about drinking lard or the idea that everything on your plate should be swimming in it). Protein from meat/organs are only included in sufficient amounts (generally 2 to 3 ounces per meal). Nothing that I consume supports the coffers of multinational corporate interests and the meat that I consume comes from animals that have been allowed to live in fresh air in sunshine, humanely and sustainably raised while eating a diet that is similarly natural to them.

Civilization might not be all bad, but it seems to me we could all benefit from becoming just a little more feral and restoring our Primal birthright.

ENDNOTES

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In true “Discussions” form, the interview with Nora Gedgaudas immediately stirred the pot. That is even before going to print.

The reason is that the science on optimal human diets is now starting to match the anthropological and archeological realities: fat didn’t wreck us, grains did. So while the ruins of agriculture upon our lives and the world gained mainstream acceptance, the underlying core is a slower moving understanding.

Civilizations are built upon cheap energy. Primarily, grains.

They require constant intake and upkeep. As they replace breast milk for infants and children, populations expand creating more hands in fields. Hungry stomachs are willing to fill empty skies with gods of cultivation and husbandry, therefore heeding the warnings of their earthly counterparts who, non-coincidentally, hold the keys to the empire. More specifically, those in power guard the storehouse.

That flash of history is far from controversial. However, when we question the dietary guidelines offered to us by capitalists and reaffirmed by the state—heavy on fortified grains, but primarily sugar-based—against the compounding counter-argument, things change. The closer something is to home, the harder it can be to confront.

Heart disease is the number one killer in the United States. Of the top ten causes of death, diet and lifestyle take the lion’s share both directly and indirectly. The impact agriculture had on human longevity was an immediate decline. Industrialism hadn’t done much better; the

average life expectancy in 1900 was 31 years of age. With subsidized, directly marketed and highly processed diets, the only reason longevity is where it's at in the United States is because of techno-pharmaceutical intrusion and other artificial stabilizers.

We hear a lot about increased infant mortality, but, again, it's a lot of intrusion in light of declining health. One of the first studies done on the matter, led by Dartmouth University in 2015, found that between 2010 and 2015, there was a 23% increase in neonatal intensive care unit (NICU) admissions. Of that, by 2012, over half of those babies were at normal birth weights. The standard reason for going to the NICU, premature birth, was surpassed by other compounded health problems.¹

If there's a secret to health and wellness, rest assured, civilized diets and lifestyles are definitely not hitting the mark.

Personally, there are few more revealing influences on going beyond the drawing board and back to the cave art than Nora. Hence the excellent interview. Not one to let ballpark numbers fly, I decided to field test a primary working basis: the percentage of caloric intake from dietary fat.

Outside of the sago-heavy diet of the Penan of Borneo (a diet with a questionable lineage), the diet of the Bushmen seemed to me to be a pretty hefty challenge in terms of needing to utilize a lot of potentially carbohydrate-heavy tubers and melons in the water-deficient Kalahari.

On to the test.

Testing the Numbers

Here, we have a lot to work with as anthropologist Richard B. Lee's 1979 ethnography, *The !Kung San*, has a record of nearly everything hunted, foraged, scavenged or otherwise consumed during his fieldwork. Everyone who wants to write off anthropology as though it's armchair philosophy, take note: ethnographies are largely a collection of stories, beliefs, myths, but, really, a lot of extensive data collection.

So this is what we're starting from. Quoting Nora on "optimal" physiological and psychological human diets:

we literally shifted from a diet comprised of close to 90% animal source foods rich in brain-building fats to as little as 10%, in favor of starch—and this has yielded some rather obvious consequences.

Extrapolating that on an evolutionary scale:

Stable isotopic evidence from human bone collagen remains representing vast periods of human history show an unmistakable (if not overwhelming) primary dependence upon animal source foods during the rapid encephalization of the human brain roughly two million years ago²

Note “vast periods.” The argument is *not* that we *only* ate animal fats, but that *during key periods of Homo development* dietary fat was our *primary food source*. We can, have, do, and will eat many other things, but, from a physiological perspective, we don’t have to. We are obligate carnivores. There are plenty of reasons to eat plants, roots, mushrooms, and more; some because they are medicinal, some because they’re helpful, but, don’t disregard your taste buds: a lot of them just taste really good and they’re still good for you.

Caveats aside, this is our ballpark: 90% of *optimal* caloric intake in the form of dietary fats.

Let’s test it out.

This is what Lee found. Average caloric intake per person, per day: 2355 calories. Considering their size, stature and blending male/female averages, that’s really high. That only emphasizes the importance of movement and activity in nomadic hunter-gatherer life, but we’ll set that aside for now.

Here’s how those calories break down on average:³

Class of Food	% of diet by wt	Weight (Grams)	Protein (Grams)	Calories
Meat	31%	230g	34.5g	690
Mongongo nuts	28%	210g	58.8g	1365
Other veg	41%	300g	3g	300

That definitely looks like it would be inline with her generalized percentage: plants, roots, tubers, fruits, and bulbs making up 12.7% of caloric intake.

So that begs the other question: How much of that is carbohydrate? And, what tubers/veggies qualify as “starchy carbohydrates?” Not all tubers, melons, and bulbs are high-carbohydrate.⁴

Lee actually does have the nutritional data for most primary foods (all per 100g as eaten, cooked or raw based on !Kung preferences):⁵

Mongongo nuts (year round): 2.2g net carbs
Mongongo fruit (Apr-Nov): 66.7g net carbs
Baobab fruit, nut (May-Oct): 40.7g net carbs
Vegetable ivory fruit: 60g net carbs
/Tan root (year round): 7.2g net carbs
!Xwa root (year round): 4g net carbs
Sha root (year round): 15.3g net carbs
Tsin bean (Feb-July): 22.2g net carbs
Tsama melon (Jan-Sept): 3g net carbs

It's worth noting the moisture percentages on those roots as well:

/Tan: 82%
!Xwa: 90%
Sha: 78.4%
Tsama: 91.3%

Not surprising, most of the roots are high in water content, most are not high in carbohydrates.

That's just a sampling. It would seem that the year-round roots predominantly carry a lot of water. But if we're comparing the foliage/fruit intake at 12.7% of the caloric input or 300 calories and dividing that over those fruits/roots/melons as the only source of carbohydrates coupled with what they're getting from mongongo nuts (note: I couldn't find the calories per 100g, but an average of the 8 major tree nuts is 630 calories/100g = 4.77g net carbs total), then depending on fruit intake, they're virtually always going to remain below 100g net carbs per day on average. That's even when being pretty generous.

So using an anthropologically contemporary example, for a society that utilizes a fairly high number of roots/tubers (42 they considered edible), to have numbers consistent with what Nora has ball-parked (10% of the diet as predominantly non-animal fat/dietary fat), that's pretty telling.

Even if you add in 100g of raw honeycomb, that's an additional 86g net carbs. I'd personally say 100g of raw honeycomb and I'd feel "gorged." Saying honey-craving HGs go up to 200g of honey comb, that's basically the same amount of net carbs as four Poptarts or four

Twinkies or one container of 8th Continent Chocolate Soymilk or a half a pack of Twizzlers.

By comparison to the Standard American Diet, that's a moderately low peak. What they might consume every now and then is a fraction of what the average movie theater goer could down in one sitting.

To be completely honest, that's more on point than I was suspecting it would be, but there it is.

At this point it's worth restating that the way Bushman ate wasn't a moral or ideological diet. While Lee was weighing out and evaluating their caloric intake, they most definitely were not. This is what they opted for out of what their environment had to offer. By all means, they were perfectly happy with it.

The optimal human diet, in this case, was the default one. They didn't have to restrict themselves from seasonally gorging on honey and fruits because, to state the obvious, they lived the optimal human lifestyle. They weren't working desk jobs, they didn't drive in cars, and they weren't wasting calories planting gardens or tending livestock. Didn't have to. Didn't want to.

So What, Pencil-dick?

There are two reasons why I think this is important.

One is, as Nora highlights persistently, that civilization throws health crisis after health crisis and ecological crisis at us. It's more than we can take. And while we have the ability to artificially prolong and stabilize, it's not doing us any favors. If we want to overcome the impacts of civilization, then the sad truth is that breaking this down into numbers is pretty damn helpful.

The second is that we know civilization has done us a lot of harm and, as power centralizes, the implementation of control becomes more insidious. The extent of that damage is a central aspect of what we're doing with *Black and Green Review*, in particular, and as anti-civilization anarchists, in general. The point is the more we know, the more we can undermine and, hopefully, undo.

In addition to that, we can also understand just how much the consequences of civilization have hit those who have resisted it the hardest.

And in this case, that's the Bushmen.

Lee's time with the !Kung occurred during an era of great change. Going from nomadic hunter-gatherers to forced settlements, then to

further government and missionary intrusion, the loss of ancestral lands to neighboring herders, then the loss of land and hunting rights to a “nature reserve” (while diamond mines have always been active, trophy hunting tourism never faded, and, now, fracking for natural gas is permitted), persistent relocation, and subsequent conscription into the army: the trend is one directional, the Bushmen are being forced into history.

This isn't genocide in the past tense: it's ongoing.

And here we return to the precious dietary advice of civilization. So while the ancestral diet of nomadic Bushmen was, as we've just seen, 87.3% from animal sources and mongongo nuts (primarily in the form of dietary fat), it is now the handouts given in settlements. Their traditional way of life rendered illegal (hunters are routinely beaten and arrested for “poaching” while subsistence hunting), alcohol was made available along with plenty of sugary drinks.

By the 1990s, the Ju/'hoansi would “often drink several mugs of strong black tea containing as many as seven or eight tablespoons of sugar in each” at the Nyae Nyae settlement. That's roughly *half* of their caloric intake at that time. It doesn't stop there:

*Average Ju/'hoan body weights at Nyae Nyae had dropped by some 10 percent over the period their diet transitioned from being based largely on hunting and gathering to being based largely on refined carbohydrates. Nurses at the small Tsumkwe clinic are of the view that tea and sugar is still the single largest source of calories in the Ju/'hoan diet. As a result, type 2 diabetes is now a minor epidemic in a community where almost everybody is thin and many are malnourished.*⁶

Refined foods, the very ones we willingly buy and defend, are a weapon of colonization. At the point of contact, their use in decimating indigenous cultures and livelihoods has always been apparent,⁷ but, again, that's an observation that we rarely turn on ourselves.

This is the agrarian curse on steroids. Or, more appropriately, on capitalism.

Among the highest-risk populations for type 2 diabetes are “Aboriginal Canadians, Native Americans, and the people of the Torres Strait Islands, which extend from the tip of the Cape York Peninsula of Australia almost to the Papua New Guinea coastline.”⁸

No one is immune to this. According to the World Health Organization, diabetes was the sixth leading cause of death *globally* in

2015.⁹ This is a tool of domestication. Always has been. Always will be.

If we want to undo civilization, seems best to start by listening to our guts.

Endnotes

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2 Nora Gedgaudas, 'Paleo Potato Heads' <http://www.primalbody-primalmind.com/paleo-potato-heads/>

3 Richard B Lee, *The !Kung San*. Cambridge: Cambridge University Press, 1990 [1979]. Pg 271.

4 This isn't even taking into consideration "resistant starches," which may add a lot to this discussion, but I'm not in any position to elaborate on myself. For more on that, see Steven Gundry, MD, *The Plant Paradox*. New York: Harper Wave, 2017.

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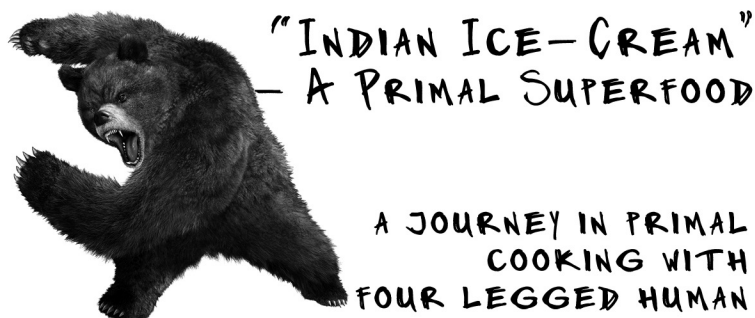
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FERAL NUTRITION PRACTICALLY APPLIED:



A JOURNEY IN PRIMAL
COOKING WITH
FOUR LEGGED HUMAN

With all the talk in this issue of BAGR regarding what we should be putting into our bodies in order to most effectively resist domestication and civilization, this is an opportune time to share a primordial circum-boreal indigenous recipe for making tasty on-the-go fuel sourced from wild animal fat....

I feel like a real person again. My mind and body are buzzing with vibrancy and an overall sense of well-being. Things just feel right. I did not just simply eat; I gave myself a dose of potent medicine.

In this instance, it was a mixture of bear fat, blueberries, and dried pounded whitefish. Any mix will do however. Your goal is to experience the pure joy of allowing your body to run on wild animal fat. This is the medicine and the magic.

First-things-first; you gotta ditch the processed simple carbohydrates sourced from the domesticated, industrial world. The formula discussed here will never work if it's mixed up in that poisonous cocktail.

Next you need animal fat, most preferably wild sourced, grass-fed etc. It really does not matter from what species; deer, elk, moose, pronghorn, caribou, bison, and boar are all ideal sources. Rendered bear fat is relished by many indigenous peoples of the north around the world and its creamy consistency makes it the most ideal source for this particular recipe.

Once you have a nice pile of fat, render it over high heat. Pour the resulting oil into a container to let it solidify (as a primal superfood byproduct, make sure you also fry up the leftover fat and skin into cracklings for trail snacks).

Gather as many berries as you can. Any kind will do, especially if you are going to eat it up and not try to store it. I use blueberries or cranberries usually, just because that is what I have access to, and because they freeze well.

Then you need fish, any kind. Depending on the product you are looking to make, you can use red meat or bird meat too (more on that below). Dry or cook the fish, peel all the meat off the bones and mash it up.

Take your rendered fat and warm it up just slightly and start stirring the mashed fish into it. As it melds together start adding your berries (frozen or raw). Keep mixing and mixing until you get the sense that the consistency is becoming fluffy. Once this is done, it's time to freeze your feral superfood concoction (outside in the winter cold or industrially, depending on your circumstances of course). Allow it to freeze and then whenever you are in need of some lipids, bring it in to slightly thaw; just enough so that you can scoop it up in spoonfuls. Think ice-cream, because that is what this is, the original form, from the ancient arctic and, at least for me, just as good, a zillion times better really, for so many important reasons...

Once you get used to it, the berries will add a bit of sweetness (this is extra special if your bear was living on berries. Berries are called 'berries' because they are bear food, by the way, in case you didn't already know). And, while I know for some people this all sounds a little bit 'fishy,' fish-adverse people need not worry as there generally ends up being very little fish-taste in traditional "Indian ice cream," as somehow the fat and berries do a really good job of covering that up.

Today many indigenous peoples of the north still make and relish "Indian ice cream" or "Eskimo ice cream." Although sadly the rendered wild fat is now most often horribly replaced with Crisco, and copious amounts of sugar are added. Nonetheless, this is an ancient and vitally important food in the human history of the north.

The "ice-cream" version is just one possible style. "Food" across the planet for most of human history probably consisted of similar concoctions, wild animal fat being the foundation. "Pemmican," the famous trail food of the North American Plains Indians, is nearly the same thing as "Indian ice cream." Here you mash rendered fat up with pounded dry meat and dried berries and shape the mix into balls or bars to solidify in the sun; feral super-fuel that will keep your mind and body running in tip-top shape.

I'm not joking about the 'buzzing' you are going to feel in your body if you start trying this. Once you begin to become fat adapted, a few spoonfuls of this mixture will keep your body and brain running

comfortably for several hours. The difference in well-being you will feel is completely mind-blowing really. So do what it takes to get after the wild fat. Scavenge roadkill, find hunters and processors that will donate their fat to you (almost all of them throw it in the garbage anyways and that is such a travesty!), or do your own harvesting.



Photo: a Dichinanek' Hwt'ana elder and his bowl of "Indian Ice-Cream" made from dried whitefish, crowberries, and whipped black bear fat.

Photo by Four Legged Human

FIELD NOTES FROM THE PRIMAL WAR



Olympia Commune. Nov. 24, 2017.

True Crime Case Files:

FOR
EDUCATIONAL
PURPOSES
ONLY

Olympia Commune

Where: Olympia, WA

When: Nov 17–29, 2017

On November 16, 2017, the Keystone Pipeline spilled out 210,000 gallons of oil near Amherst, South Dakota. Undeterred, the Keystone XL Pipeline (a sister branch of the Keystone Pipeline) got another crucial green light in its permit process just days later.

Unwavering, a group of anarchists, indigenous resisters, and activists took to the ports the day after the Keystone spill in Olympia, Washington (occupied Nisqually and Squaxin land) to block the railroad tracks. So begins the brief, yet impressive, history of the Olympia Commune.

The blockade was not without precedent.

A year earlier in the same location, a group of activists and indigenous resisters took to the same spot in solidarity with the Standing Rock encampments and water protectors defying the Dakota Access Pipeline (DAPL). What became was the Olympia Stand: a blockade leading to the Port of Olympia along a railway. The target was intent: in 2012, the Port took on contracts to start handling shipments of the ceramic proppants used in the process of hydraulic fracturing or fracking.¹

That contract put Olympia in the path of getting the proppants from China, where they are being produced, directly on the rail to the Bakken shale play. Bakken—one of the largest sources of natural gas in the Americas—takes up a portion of Montana into North Dakota, but is a central part of the Keystone XL project.

That put Olympia right in line with Standing Rock. A point that clearly didn't go unnoticed. The Olympia Stand lasted for 7 days and created a lot of attention around the proppants making their way through the port, something that had been officially and publicly denied. The Stand drew wide support and created an emotional and intense showdown when the blockade was raided with force. The stand off ended with a dozen arrested.

But as the Olympia Commune would uncover, through diligent FOIA work, that those seven days “cost oil giant Halliburton two fracking operations, and in turn Halliburton severed ties with the Port of Olympia.”²

Not bad for seven days.

When the Stand re-emerged a year later, it was stronger, larger, and noticeably more anarchist. Directly to the point, more anti-civ anarchist. That brought out some more of the rowdy and defiant elements, resulting in communiqués reminiscent of *Green Anarchy*, or a time when anti-civ anarchists read and were influenced by Venomous Butterfly publications without taking the egoist parts literally.

The Commune was unquestionably not fully anarchist. The communiqués were embracing the idea that there was no cohesive whole. That’s especially important since libertarian socialists and the IWW’s “Green Caucus” (seriously) also held outspoken roles. Hilarious takedowns against the ideals of progressives and liberals with their naïve hopes for civilization were published alongside critiques of anarcho-syndicalism. Something even more necessary as Antifa tends to leave the IWW and its anarcho-syndicalist ideology as an unquestioned fall back.



That being said, the anti-civ writings certainly stood up front. Notably, when the Commune did release some demands, of the “numerous” ones, 20 made the list. They range from the destruction of dams, the composting of police, bricks for every window, and just a blank space, to the hilarious, such as; “while science still exists, one of us be endowed with an Adamantium laced skeleton,” “blow up the sun,” and for the Olympia City Manager, Steve Hall, to “fight a bear.”³

Alongside the number of communiqués, there's a lot here.

In turning the refreshed Olympia Stand into quickly expanding Olympia Commune (complete with kitchens, living and working areas, hosting showings [such as Unicorn Riot's anti-DAPL documentary, *Black Snake Killaz*] and shows), there was a direct nod to the communal indigenous resistance to fossil fuel extraction and distribution. The Commune itself was a part of the practice. More overtly, participants asked loudly: "And so how do we grow the blockade into a model for how we want to live, how we want to treat each other, and how we want society to be organized?"⁴

With over a hundred people in the Commune at any time, that's a question taken seriously.

And with so many varying views, what drew them all there? In terms of collective statements, this seems to sum it up well:

*We wish to send greetings and express solidarity with Indigenous resistance to capitalist expansion across Turtle Island. From the lands of the Nisqually and Squaxin tribes, to the shores of the Wedzin Kwah on Unist'ot'en Territory, to the walls of the Tiny House Warriors of Secwepemc Territory, to the Mi'kmaq struggle on the Gaspésie Peninsula, we wish to acknowledge and honor those whose land we currently fight on and those who fight against the industrial mega-machine alongside us, near and far. Our fight against fracking proppants is also a fight against LNG pipelines, Keystone Oil, and many more; but more broadly the struggle against extractivist industry is a struggle against colonization.*⁵

While the Commune took on a life of its own, there was no question about where it stood in place and time. As would become increasingly repeated, the Commune stood for physically blocking civilization. Set up on a railway, the Commune's calls for solidarity actions were heeded.

In Atlanta, two boutiques in a gentrifying section of the city were smashed up in solidarity. In the Oakland area, train lines were shutdown temporarily "by shorting the track circuits with jumper cables." In Medford, Oregon, rail traffic was blocked and disrupted by self-professed anarchists who "used copper wire to signal a blockage." Reminding all of us that: "Railways are easily accessible and everywhere. Sabotage is fun and easy."⁶

Seemingly unrelated to the Commune, an anonymous communiqué for an action "taken in solidarity with indigenous defenders"

blocked rail lines along the Columbia River. Blocking the “flow of coal, oil, lumber and chemicals.” Again,

Trains were stopped by attaching cables to the tracks at various points.

Trains were stopped for at least several hours and maybe more. Carrying out the action took less than an hour, about \$40 materials, and little-no risk of being arrested.⁷

Railways, the veins of industry, cross the landscape everywhere. And are subject to fairly simple, but impacting, methods of sabotage anywhere. It doesn't take the Commune to act, but it's apparently a good inspiration.

What's most important about this event is that no one was arrested. At least, not yet. Inevitably, Grand Juries, informants, and a mix of corporate and state surveillance will follow. Unlike the eventful end of the 2016 Stand, this year the Communards were tipped off prior to the impending raid. The occupants opted to quietly evacuate the Commune in the night, leaving a heavily militarized police force to arrive ready for war at an empty camp. Forcing them to take the heckling of anarchists from the sidewalk without a single arrest. In the unapologetic fourth edition of “Commune Against Civilization,” this is a victory:

we had fun imagining their shaky hands putting on their gear, psyching themselves up only to find an empty camp. All the better to steel ourselves for our next date, at a time and place of our choosing.⁸

In an era when socially networked protest attempts to fumble itself through real world activism, here is the silver lining that the riotous early-to-mid 2000s hoped to produce: a shifting, unhittable target. One that becomes increasingly less bound to circumstance and space. One that is capable of avoiding the pit falls of activism and the politics of... well, politics.

Under the weight of industrial machinery and the eye of militarized pigs, the Commune was physically torn apart. But the Commune isn't gone. I look forward to its return and spread.

And I'm still hoping we see Steve Hall try to fight a fucking bear.

Endnotes

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Dear City of Olympia,

some of us at the Olympia Commune have come to the understanding that "no demands" is an incoherent strategy which does not lend itself to "progress" or "results." with this bright, new understanding, we have investigated our desires and come up with some ideas about what we really want the result of this blockade to be.

our demands are innumerable; here are just a few:

- | | |
|--------------------------------------|--|
| 1. make the port a beach again | 12. release of all prisoners and the |
| 2. blow up the sun | Total Destruction of prison, in all of |
| 3. the complete destruction of time | its forms |
| itself | 13. cessation of all space exploration |
| 4. a brick for every window | 14. the return of the tasmanian wolf, |
| 5. a wrecking ball | the aurochs, the dodo bird, the coral |
| 6. that, while science still exists, | reefs, and all other creatures and |
| one of us be endowed with an | habitats that have ceased to be |
| Adamantium laced skeleton | 15. the wilderness |
| 7. a swift and brutal end to the | 16. total freedom |
| exploitation commonly referred | 17. |
| to as "science" | 18. the liquidation of Pacific Union's |
| 8. the destruction of all dams, and | assets, to be equally distributed |
| the return of the salmon | among all children |
| 9. no motor boats ever again | 19. mandatory clown uniforms for all |
| 10. that fascists and politicians | olympia parking service employees |
| spontaneously combust | 20. that steve hall fight a bear |
| 11. compost the police | |

Make the Port a Beach Again



If karma were to exist, it's hard to imagine what kind of punishment there could be for poisoning 97 percent of the children in La Oroya, Peru with lead.¹

To me, it seems equally likely that karma exists as it does that Ira Rennert puts much thought into it while enjoying an ocean-side view from his 100,000 square foot complex in the Hamptons.

Just for reference, that is one of the largest residential buildings in the world.²

But before we get to Rennert, let's talk about something you're more likely to have heard about: lead poisoning in Flint, Michigan.

In August 2014, the city of Flint began a saga to act on a 2012 plan to switch its water source over to Lake Huron. What ensues is a run-down of the pollutants that come with industrial societies. We begin with fecal coliform bacteria, followed by massive influx of chlorine to flush that out: enough to cause corrosion in the engines being built by General Motors. Then we have E. Coli, followed by warnings over excessive amounts of disinfectants and their byproducts. This includes a chlorine byproduct, TTHM, a cancer-causing compound. Fear not, the Governor decides this isn't an immediate health emergency since the impacts of TTHM takes years to compound and form.

And then, lead.

On February 26, 2015, the Environmental Protection Agency (EPA) issued a report that the water of a Flint resident, Lee-Ann Walters, had 105 parts per billion (ppb) of lead.³ Hardly on the anti-industrial frontline, you can be assured that the EPA's safe limit of 15 ppb is an exceptionally liberal application of the word "safe."

Lawsuits issued, cases dismissed.

Scientists at Virginia Tech step in and continue testing on Wal-

ters' water. The results worsen. The EPA issues a statement showing that the lead level from Walters' tap had reached as high as 13,200 ppb. By the EPA's own numbers, water with 5,000 ppb of lead is considered hazardous waste.⁴ Here, Walters and the other residents of Flint were paying for it.

It's not worth recounting this ongoing story in full here. As it continues to unfold and deepen, there are plenty of outlets for that. But Flint is hardly alone in the matter. Even though Flint seemingly continues to get the attention to verify that this story is the exception and not the rule, that's not so true either. It has been found that within the United States, over 3,000 locales are delivering lead-filled tap water to their residents with numbers as high as what was seen in Flint.⁵ Note the present tense.

There is a story there. And it is a vital one.

Lead poisoning is a chronic ailment of industrial civilization. Based on ice core samples taken from Greenland, the amount of lead in the atmosphere increased twenty-four-fold since 1800. Quadrupling again after 1940, when lead was being added to gasoline.⁶ The impacts on children range from devastating to endemic. That's a genie that doesn't get the chance to go back into its lead pipes.

What I'm concerned about here is the sub-plot: the general sense of "how does this happen" in contemporary America. Lead, as we are led to believe, is thought to be an old issue. Congress, after all, banned residential use of lead paint in 1971.⁷ Something you can be reminded of when a landlord or real estate agent hands you a worn and withered photocopied pamphlet about the dangers of lead paint in houses built before 1971. This hand off is a crucial part of an unofficial ritual most of us have developed: where we throw the most-likely unread pamphlet in the trash.

Or, more appropriately, in the recycling.

In paint alone, lead is not an old issue by any stretch of the imagination. There remain 45 countries where you can still buy lead paint from retail stores. For industrial applications no country has banned its use entirely. That includes the United States.⁸

There's a soothing effect when you see quick action after things like when children's toys are recalled due to the use of lead paint. In 2007, a massive recall of Chinese produced toys that included 1.5 million Thomas & Friends trains and components alone.⁹

This looks like containment and control. It is anything but.

So, who still uses lead? We do. And plenty of it.

Though lead was taken out of gasoline in the United States in

1986 (not counting propeller airplanes),¹⁰ it remains in lead-acid batteries. For the most part, those are used for automobiles. But there is an increasing market here: solar power.

Between 2000 and 2016, the United States alone saw an increase from a thousand solar installations nationwide to a million. All of those installations, generating 27.2 gigawatts of electricity, account for one percent of energy consumed within the US.¹¹ That is a small percentage, but exponential growth. Not even touching on the amorphous silicon, cadmium telluride, and copper indium diselenide needed to produce the thin film, photovoltaic technologies needed in the panels;¹² to create, store, and use energy from panels requires the use of batteries.

Batteries made, in turn, with lead.

A significant portion of that lead is recycled from other batteries. If you were to believe the myths of marketers, lead smelters are leading us into a new green era: I, for one, don't.

"At East Penn, sustainability is simply who we are."

This line, not shockingly, comes from a sustainability report from East Penn, a manufacturing company based outside of Reading, Pennsylvania. Their claim of "sustainability since day one" is no more believable.¹³

They're excitedly claiming that they recycle 30,000 batteries per day. Recycling the plastic, lead, and acid from each. That amounts to 200 million pounds of lead per year. What do they have to show for it? An extensive trail of EPA violations reports, for starters. One corrective measure included de-watering and relocating an iron ore pit, which had leached toxic solvents into the groundwater. The lead content: 5,300 parts per *million*.

Remember that the EPA declares 5,000 parts per *billion* to be hazardous waste.¹⁴

While the peak of Flint's lead crisis found 3.21 percent of children had a blood-lead level of 5 micrograms or more, a 2014 study in Reading, PA found 16.14 percent of children matched or exceeded that threshold.¹⁵ I'm not quite sure how that factors into East Penn's sustainability pledge. But rest assured, the sulfur fumes created during the lead smelting process are captured to create liquid fertilizer solutions, such as Ammonium Thiosulfate.¹⁶ Since it is a nitrogen fixing addition to fertilizers, it apparently gets a pass on such non-essential tests as "mobility in soil" or degradability.

Now let's get back to Ira Rennert.

For being a billionaire with a house so obnoxiously large that it could upset other residents of the Hamptons, Rennert has been ironically described as “reclusive.” He is the archetype of the salvage capitalist. Having started in capital analysis on Wall Street, he moved into the glorious realm of junk bonds.

When his first venture collapsed under the weight of scandal, he just opted to start his own company, Renco. There he quickly got back in the game of buying the shares of struggling companies and selling junk bonds to scavenge every bit of investment from the corpse. In the process, he made a bit of money.

That 29 bedroom, 39 bathroom estate? He paid for it by bleeding funds from a magnesium-mining corporation, MagCorp, which he acquired in 1989. Taking advantage of a short-lived magnesium bubble from 1991-1995, Rennert doubled the companies’ debt load while brushing off regulators.

In 2001, MagCorp filed for bankruptcy.¹⁷ Not surprisingly, this is the same year that the EPA sued the company for one billion dollars over toxic pollution and illegal extraction near the Great Salt Lake.¹⁸ That case lasted until 2007, when a judge ruled in favor of MagCorp, not disputing that they had dumped PCBs and HCBs (which had been banned for three decades at that point), but that the EPA should have had its regulations in place 20 years prior when they began these practices.¹⁹

Can’t make this stuff up.

Inspired by the metal-fueled riches, Renco purchased Doe Run, a global producer of lead, copper, and zinc concentrates, in 1994. Unlike East Penn, Doe Run is equally rooted in mining programs and the recycling business. Like East Penn, they also make ludicrous claims, such as “mining sustainably.” If that makes you queasy, take solace in knowing that they regularly gather insights from the bastion of ecological radicalism: their shareholders.²⁰

They’re also a much larger operation; producing 250,000 tons of lead concentrate, “recovering” 160,000 tons of lead and lead alloys, and manufacturing 30,000 tons of lead products annually.²¹

When Renco purchased Doe Run, it included a lead smelting plant in Herculanum, Missouri that had been in operation since 1892. That plant had a long history of poisoning locals, but things came to a head in August 2001 when Doe Run’s hauling trucks started leaving a coat of black dust over the town. A state environmental official tested the ash and the results showed that they were 30 percent pure lead. The toxicity was equal to what you get inside a lead mine:

300,000 parts per *million*. On top of that, the dust was also heavy in arsenic and cadmium.²²

State officials released a report in February 2002 showing that 56 percent of children living within a quarter mile of the smelter had elevated blood-lead levels. Instead of shutting down the smelter, Doe Run shut down the town: rules were given on living with lead, parents were told not to let children play outside. Eventually Doe Run caved, buying up the houses within three-eighths of a mile of the smelter and bulldozing them.²³ Sure enough, the company boasts of its reclamation process of that disastrous land, turning it into a port no less.²⁴

The reason Doe Run could take what became a ten million dollar hit in Herculaneum is that it had a back up plan in action: pillaging in Peru.



Rural Missouri is well situated in the “Iron Belt” and there’s no mystery to it. The poverty is largely endemic. Viburnum, Missouri, where Doe Run is headquartered, is a speck of a town. Its limits are noted by passing a mining equipment supplier on one side of the road and a small baseball diamond on the other, sponsored, of course, by Doe Run. Miners and their families have a history of being physically violent with what they consider “outsider” environmental activists.

Children under six are recommended to get their blood tested annually, a free service for the number one lead producing state in the US.²⁵ The town has a single medical clinic. When I asked one of the doctors about the free testing for children, she seemed unaware. The only lead tests they did were on miners after they were showing symptoms of sickness.

While the effects of being at the center of over one hundred years of lead mining and smelting are apparent, they’re still on the First World map.

La Oroya, Peru is not.

The core of La Oroya's downfall is a formerly state-owned smelter. Its operations began in 1922 and after the Peruvian government passed legislation for, what it considered, costly renovations; they sold to Ira the Salvager's Renco in 1997. The city, with its population of 33,000, has been ranked one of the top ten most polluted places, on the short list with the likes of Chernobyl.

If you can picture the surface of Mars, you're pretty close to what La Oroya looks like. Nearly a hundred years of regulation-free smelter operation produced enough acid rain to kill all vegetation on the hill-sides. What remains of the copper-colored Mantaro River has been redubbed as "dead river," for reasons that I'm sure you can imagine.²⁶

Alongside lead, the smelter here refines arsenic, cadmium, copper, silver, and gold. Renco's Doe Run Peru did meet the lowest level of contractual obligations, putting over \$100 million into a specific attempt to reduce the pollution: building a disposal pit for arsenic trioxide. However, in the first two years of Doe Run's management, the levels of lead, sulfuric acid, and arsenic all rose.

This is an area where the air is found, in 2007, to have unheard of levels of pollution, vastly beyond what is considered "safe;" 85 times for arsenic, 41 times for cadmium, and 13 times for lead. The town's water supply has 50 percent more lead than what the World Health Organization deems permissible. The "dead river" is choked with copper, iron, lead, manganese, and zinc.²⁷

For children here, lead poisoning begins in the womb and stays with them for life.

Facing a legal battle over the failure to improve the level of pollution stemming from the plant, Renco opted to just shut the smelter down in 2009. Lawsuits continue to go back and forth over Doe Run's poisoning of the children and city of La Oroya, but buffered by international borders, they continue to drag out.²⁸ If dodging a lawsuit for their MagCorp disaster—which happened within the US—is any indicator, it's unlikely that Ira will lose no more than some sleep on the matter.

For all living beings, shutting down the smelter alone is a start, but it isn't the end. Lead poisoning isn't a curable affair for children and those afflicted in the womb carry this with them until they finally succumb to it.

The point is this, this is an exceptionally brief look, primarily, at one heavy metal: lead.

That is just one component, one piece of this vast and seemingly unending dissection of the world into a resource pit of usable materials for civilization to prey upon. Just one piece of the technological web we have been woven into. More so, it is a piece that ecological and environmental histories and accounts very rarely seem to even consider as a contemporary issue. In shelves of books on ecological devastation, lead hardly even makes it into the indexes.

Every component, every piece within every machine, all the paints, the coatings, the connectors, the solder, and the adhesives: all of it carries these legacies. Each has a uniquely vile background, present, and future.

This is the world that technology has created: the world that domesticators dream of and programmers plan for. We can feign ignorance and gloat in the hopeful prospects of technocrats and liberal fantasies where the future is brighter through chemistry. That enlightenment ushers forth technological improvements and a saner sense of ecological sustainability.

The reality is the opposite.

An over-stimulated and hyper-connected virtual reality only offers more corners to hide the real world consequences of our stuff. Our junk. Radical, conservative, political, or anti-political: it doesn't matter; we're all using batteries. The delusions of silver bullets like a solar energy transition rely on the fact that issues like lead-based production are toxic particles buried in the dustbin of history.

They absolutely are not.

As the discussion surrounding lead poisoning in Flint continues to cycle around the dilapidated and withering infrastructure, the narratives of civilization succeed by turning this into a problem that seemingly can be managed. It can't. And as the lead pipes and lead paints are removed, they're simply being displaced, relocated. They aren't gone.

Not only are we stuck with them, all life on this planet is.

Lead impacts all living beings. It stays in the soil: it destroys water. One of the leading causes of death for Bald Eagles remains lead-poisoning caused by residuals of lead in ammunition throughout carrion or consuming lead fishing lures swallowed by the fish they hunt.²⁹

It is easy to see scum like Rennert, the predatory salvage-capitalism of Renco, or the solar roof delusions of Tesla's Elon Musk as isolated or historical creations. In every sense, they are, but wretched as all of them are, they're just managers, profiteers, and programmers: ultimately replaceable and replicable.

What is vital is to remove the comfort of distance and a historicized pollution. Lead is a heavy drop in the bucket of the toxic upkeep for an imposed global order. This trajectory cannot be corrected or sustained, only destroyed. This is a legacy that we are stuck with, but as a look at the gleeful 1930s era advertisements for Ethyl—the lead additive for gasoline—may indicate, the next solution could always be worse.

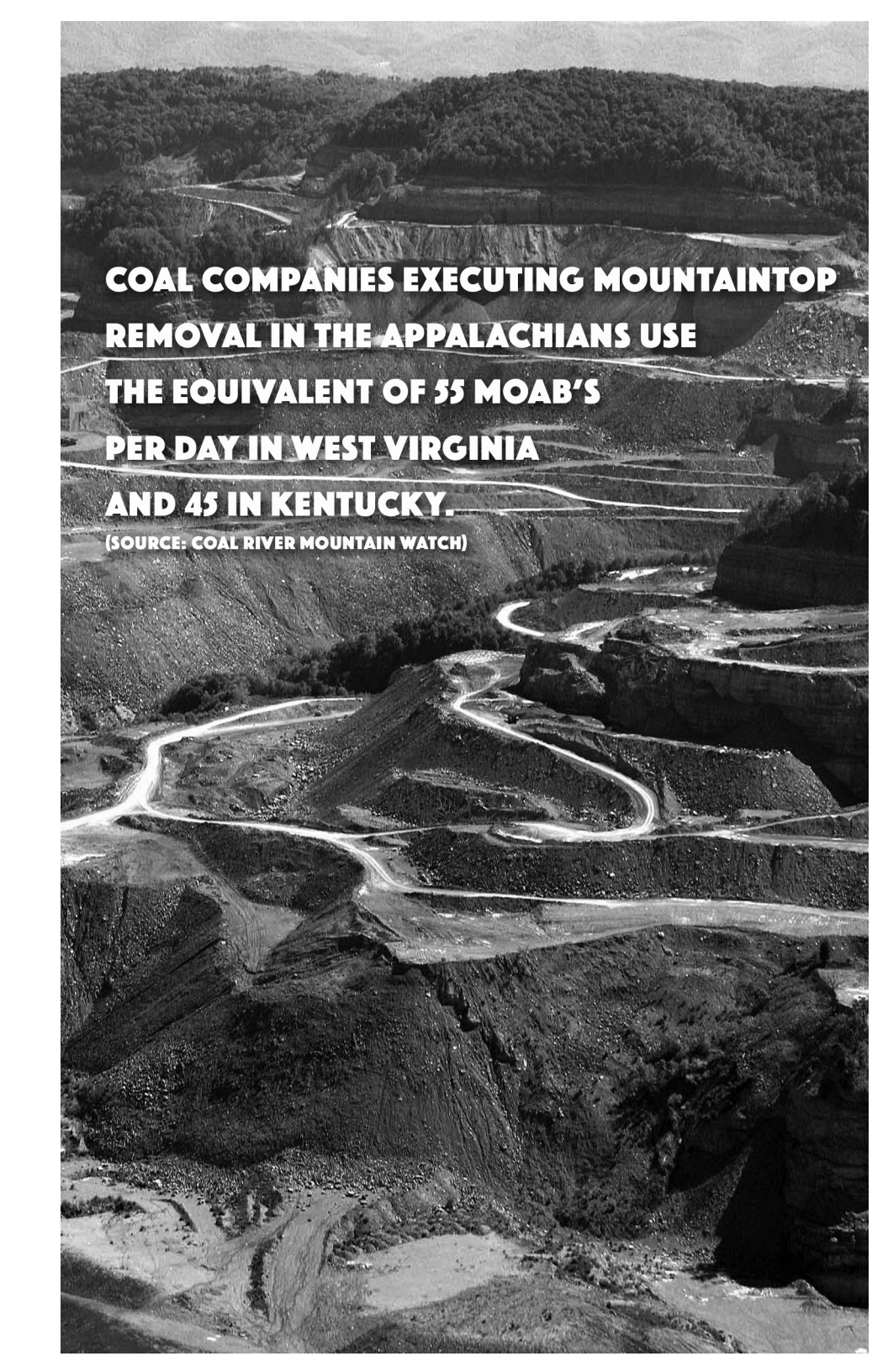
Then again, only if we let it.

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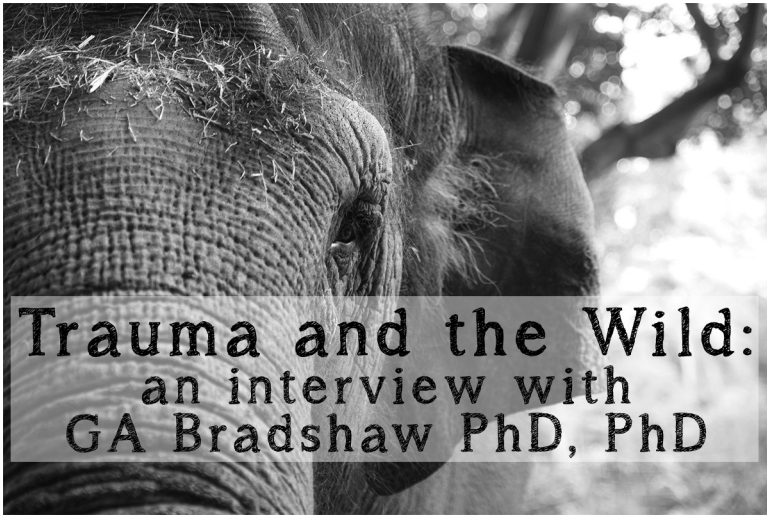
An aerial photograph showing a massive explosion. A large, dark, billowing plume of smoke and debris rises from the ground, dominating the upper left portion of the frame. Below the plume, a white crosshair reticle is visible, centered on the point of impact. The ground is a light, textured surface, possibly a desert or dry earth. The overall image is in black and white, emphasizing the scale and impact of the event.

**ON APRIL 13, 2017 TRUMP'S ADMINISTRATION
DROPPED THE "MOTHER OF ALL BOMBS"
- THE LARGEST NON-NUCLEAR WEAPON
THE U.S. HAS IN ITS ARSENAL -
ON EASTERN AFGHANISTAN.**



**COAL COMPANIES EXECUTING MOUNTAINTOP
REMOVAL IN THE APPALACHIANS USE
THE EQUIVALENT OF 55 MOAB'S
PER DAY IN WEST VIRGINIA
AND 45 IN KENTUCKY.**

(SOURCE: COAL RIVER MOUNTAIN WATCH)



Trauma and the Wild: an interview with GA Bradshaw PhD, PhD

There's a crucial myth within the heart of civilization: the notion that our evolution, as humans, was unique. That myth makes us feel different, special. It makes our actions justified. It turns our living world into an empty space; one that we tell ourselves was waiting for our hands and machines to make use of. It allows us to remain indifferent to the consequences our lives have on the world.

While many chose to perpetuate the view of an unthinking, unflinchingly brutal wildness—some even celebrating uncharacteristic episodes of violence—others have chosen to dig. Within the rising tide of animal cognition studies, ecologist and psychologist GA Bradshaw, PhD, PhD has done truly groundbreaking work. Her 2009 book, *Elephants on the Edge* (Yale University Press), moved beyond simply showing that other animals think and feel by showing how interactions with civilization have resulted in PTSD amongst Elephants.

Alarm bells rang, we aren't just decimating the wild world: we are devastating it.

Her new book, *Carnivore Minds* (Yale UP, 2017), digs further on the subject. By looking at carnivores, the supposed emblem of blood-thirsty existence, she isn't showing how animals are more like us, but how, as social animals, we are all alike. It's a hard reality check, but a necessary one. She is the director of The Kerulos Center whose core can be reflected in its logo, which represents "a relinquishment of human privilege."

Gay's work is crucial, not only to understand how our lives impact the wild, but how it continues to impact us. We aren't exempt

from any of this. I consider her work on how trauma disrupts and, subsequently, shapes cultures as a bedrock for comprehending our world. If there is any hope to heal, this is where it begins.

Thank you, Gay.

-KT

In Carnivore Minds you share stories about Crocodiles playing, Rattlesnakes mourning, and Sperm Whales sharing their newborns with human divers. I always read these kinds of passages with a sense of amazement and reverence, but there's another side to it as well: the reality that we miss out on so much about the nature of life by trying to define our own uniqueness at the world's expense. It feels like sharing stories with an old friend while in prison. There's warmth to it, but there's sadness at what we're missing out on and the pain we're inflicting in the process.

Yet this is the necessary work: to breakdown these barriers. Can you elaborate on why you chose to focus your newest book on carnivores in particular? What are the particular barriers that we have surrounded "predators" with?

I chose to focus on carnivores because they are one of the most vilified groups. The myth surrounding these species is formidable and has dire consequences. Carnivore species are stereotyped as bloodthirsty, cold-blooded, driven-by-instinct-alone, mindless killers. Most often, the term "predator" is used for these species. But I chose to use "carnivore" because "predator" carries so much negative baggage. Actually, categorizing a species as "carnivore" is not accurate in many cases. Technically, a carnivore is a species that belongs to the taxonomic order *Carnivora*, Animals who eat other Animals. But Grizzly and Brown Bears are, in fact, omnivorous. They largely feast on plants and roots and supplement this diet with fat-rich foods such as salmon and pine nuts. There are species who do eat other Animals, such as Robins who stalk and eat Earthworms, yet they are not grouped as carnivores.

The image of these species perpetuates routine genocide. While people may accept that the herbivorous charismatic Elephant is susceptible to psychological trauma, it is much more difficult to convince someone, even if the science inarguably supports this, that a Wolf, Crocodile, or White Shark has comparable mental and emotional capacities and vulnerabilities. Subsequently, people who would never think of hurting an Elephant show no compunction when it comes to killing a Raccoon, Skunk, Coyote, or Bear who comes into their backyard. No wildlife species is doing well, but most people don't pay

attention when Coyotes, Pumas, and Bears are mass murdered annually. In Pennsylvania, an estimated 40,000 Coyotes are killed each year. Forty thousand! At best, such acts are considered by many as a “necessary evil” to counter predators from taking over and threatening human life. When science and statistics are examined, however, these species cause no human harm relative to war, domestic violence, murder, and car accidents. The number of injuries and deaths sustained in our own homes, like falling down in the bathtub, are by far more dangerous statistically. Negative attitudes towards carnivores are fueled by myths that have no scientific basis.

You’ve written about Whales beaching in order to try and pull a young calf back into the ocean, sometimes dying in the process, and of ground squirrel mothers risking their lives to defend their young. A common theme is that the emphasis civilization has placed on “the Self” is a historical creation and one that nearly all social animals have no need for. The self, in an egalitarian, communal sense, seemingly only exists within the context of that culture and the world it inhabits.

How far have we drifted from this kind of innate sense of place and community? How has the rise of Otherization contributed to our ability to decimate and conquer other species and communities?

The answer to these questions is all around us. Seeing and acting as if we were separate from each other and the rest of Nature is a disaster. Science shows that there is no “other.” For instance, quantum physics clearly describes a universe of oneness and interdependence, yet this foundational reality has been ignored for over 100 years in favor of perpetuating separatist, Otherization, as you call it. Instead of bringing quantum physics’ profound insights to bear, which are resonant with many human cultures—Buddhism, Christian mystics, American Indian cultures, and so on—the field has been harnessed by the dominant cultural and political agenda to make more money, make faster computers, and increase our ability to safeguard securities and the military. Science is used selectively to maintain the illusion that humans are apart from everything else. Data and theory are distorted to validate a particular agenda—human control and power.

It is critical to note that our present day colonizing culture that took off five hundred years ago is an anomaly in the human record. Today’s ecocide derives from European-based cultures. As neuropsychologist Darcia Narvaez and anthropologist Brian Ferguson point out, similar to Animal cultures, 99% of *Homo sapiens* have had a col-

lective, prosocial sense of self. Aside from this peculiar human culture that has taken over the globe, most all other humans have had values of deep care and respect for each other. For example, American Indians lived very well in healthy co-existence with Wolves, Bears and so on. What's the evidence? The numbers of species and populations of wildlife that greeted pioneers.

Animals and humans who embrace prosocial oneness have been decimated by colonizers. Hundreds of American Indian tribes were intentionally destroyed. This persecution continues. Uncontacted peoples such as those in the Amazon and Andaman Islands who reject "civilization" are treated like enemies. The prevailing view cannot tolerate that some humans don't want modern education, lifestyles and technology. For similar reasons, Wolves, Bears, Sharks, and other carnivores are not tolerated. Their mere presence is regarded as an insult.



From Elephants to Wolves and Coyotes, the driving force of eradication has largely centered around protections for agriculture in the forms of farms, ranches, and feed lots. The sales pitch is that wild populations threaten our way of life. How have the USDA, farmers, and ranchers influenced our perceptions of wild species and waged war on them? How have they been able to keep what they're actually doing out of sight?

There is a combination of factors that have co-evolved and work together synergistically. For one, the "predator myth" prevalent in North America, Africa and other colonized continents was directly imported. Europeans had already killed off Wolves and Bears when they colonized. They brought their myths and violence to the New

Worlds. The mandate of control and conquer remains deeply engrained through the perpetuation of these myths in books, family stories, movies and cultural rituals. Most hunting is not motivated by a need for food, rather it is a cultural ritual based on the idea that killing is right. We are socially conditioned to see Bears as bad and dangerous. All of these cultural myths became institutionalized as government policy and law which are embodied in present-day wildlife agency practices. Carnivore genocide became policy. Government agencies who are charged with protecting wildlife basically have a vocabulary of one word—"kill."

Another factor is ignorance or lack of awareness of reality. Suburban and urban people are largely unaware that the popular image of carnivores is fiction and that millions of carnivores and herbivores are killed annually. Then there is the selective use of science. It is well established that nonhumans—Bears, Wolves, Rattlesnakes, Sharks—have comparable minds and brains as our own. Neuroscientists use Monkeys, Cats, Dogs, Rats, and other animals in experiments and research ("animal models") for the very reason that Animal brains and minds are like ours. The only reason that billions of Rats, Cats, Horseshoe Crabs—yes invertebrates too!—are used for these purposes is because researchers know that these species have the same brain and body cogs and wheels as we do. The evidence is the billions of dollars spent on using Animals in lieu of humans. Researchers can continue to do what they do because science is used selectively and the truth is denied. It is a very sad state to have our education system continuing to brainwash the young.

Animal sentience is ignored in biology and other disciplines which educate those who end up responsible for wildlife policy and conservation. I established the field of trans-species psychology to bring attention to the fact that science is used selectively to maintain myths. Subsequently, it is not science, but *scientists* who have muddied the waters. Scientists misrepresent scientific theory and data for the purpose of maintaining the myth that humans are superior. It is scientists who help maintain the myth.

There is another factor that helps perpetuate the myth. Because the salaries and budgets of wildlife agency personnel depend on hunting and fishing revenues, there is an intrinsic conflict of interest. It pays to kill. Myth and motive are joined in a potent partnership. All of this is tied in with the gun, military, and subsidized ranching and farming lobbies. As legal scholar Charles Wilkinson points out, current wildlife and land use policies—the "lords of yesteryear"—are

way out of date relative to scientific knowledge and public opinion. These policies are not in sync with either public opinion at large or science. Only a very small minority supports the myths.

If you look closely, you can see how policy and science are contradicted. For instance, it is against the law to give food to Bears or Deer – you can be arrested and people have been jailed for this. But, it is legal, and even encouraged, to put out food (bait) for a Bear or Deer for the purpose of killing him or her. State wildlife agencies even have courses that teach people how to bait and kill Animals. Finally, people are starting to see through the myths. Lawmakers have discovered that wildlife agencies function largely unmonitored, they “doctor” data and distort information to justify the killing and delisting of endangered species.

At a broader societal scale, the agenda reflected in dominant philosophy of “humans are separate from and superior to” Animals reinforces all these elements. Nature has become an elective to human life. Life has become entirely defined as a human construct and Nature has lost its essential meaning. We look for meaning among humans, not Nature as a whole.



Your groundbreaking book Elephants on the Edge really drove home a central point: not only are we similar to Elephants, but they too suffer from PTSD at the hands of civilization. Having worked to rehabilitate Elephants, can you walk us through some of the things that a captive Elephant has likely seen in their life and how it has impacted them?

It varies somewhat with country and time, but generally speaking, the Elephant one might see at a zoo, wildlife park, circus or giving rides has lost his/her mother and family through a series of violent acts committed by humans. An infant Elephant is forcibly taken from his mother and family, has witnessed them slaughtered, then is brought

into captivity and subjected to physical and psychological abuse and deprivation. In captivity, he or she is kept isolated or with other Elephants whom he/she does not know and further subjected to emotional and physiological suffering such as rape, what is sanitized as “artificial insemination.” Humans who have undergone these traumas are usually diagnosed with Complex post-traumatic stress disorder (C-PTSD), a term that was coined to describe the horrendous experiences and subsequent symptoms of concentration camp survivors and tortured prisoners. Elephants and other Animals including Reptiles, Amphibians, Fish, and Birds are also vulnerable to PTSD. When you see an Animal in captivity, you usually see him or her exhibiting profound psychological and physical distress—Elephants bobbing or swaying incessantly, Tigers and Bears pacing without stop, Orcas self-mutilating. Because wildlife incarceration is culturally normalized, people don’t perceive these symptoms as abnormal. And since people who profit from Animal captivity don’t correct these misimpressions, the myth is promulgated even more.

The narrative about nature “red in tooth and claw” is perpetuated by stories of exceptional violence and sociobiological tales such as alphas ruling by might in strictly hierarchical societies. Not unlike Napoleon Chagnon’s parading of the warfare among the Yanomami as disease and contact spurred violence as indicative of our Hobbesian nature, you’ve drawn a parallel with Jane Goodall’s work with the chimpanzees of Gombe. Even setting aside the created camp situations, these were wild chimps that suffered horrific violence. We create these situations, then look at the way societies, human or not, react to them as though we were never there. How do we turn those narratives around and show how consequential our colonization and decimation has been?

Myth and falsehoods are maintained by Orwellian use of language, lies, distortion and misrepresentation of science, and fear. The facts are masked by language—“harvesting” in lieu of killing, “pest control” in lieu of for mass murder etc. So the way to start to expose and turn around the false narratives is to use transparent language and dispel fear. For example, instead of tolerating the use of “harvest” or “predator control” use “slaughter for gain” and so on, openly telling the truth in accurate language about who Wolves, Bears, Crocodiles really are.

Secondly, we have to dismantle the assumed human privilege. Our species has no special right over others to live and escape death. Once in a while a human may get eaten by a Puma. While it may be

tragic for that person's family, these things happen. That is life. Nature and death are reality. Val Plumwood, whom I quote in the Crocodile chapter, talks about her own "conversion" to reality. While a Saltwater Crocodile was trying to kill her, she inwardly protested that "I'm more than food!" Then, realized that, no, we *all* are candidates for being someone else's food. Humans are no more special than any other Animal who might end up eaten. Common minds implies common ethics. In short, to turn the false narrative around we need to really understand who wildlife is and begin to learn their ethics and live like them, how they truly live, not who we say they are.

How has human impact, warfare, agriculture, and expansion changed the behavior and transmission of wild cultures?

Human violence has shattered Elephants societies and those of other wildlife, including carnivores, who are subjected year after year to relentless genocide. Trauma transmits across generations, socially and neurobiologically. So while a Puma may look like a Puma, he/she is no longer the same Puma inside prior to colonization violence. We have exported our own cycle of violence to other species.

Do you feel these populations can recover?

Yes, because non-human Nature is much more powerful than our species. That being said, however, it is imperative that humanity give up the demand for privilege and begin to learn how to live like Animals again. When you see through the myths about carnivores and other Animals, then you see an example of who and how our species can evolve to be. No Animal, no matter if they are Sharks, Octopus, Bears or Rattlesnakes—has ever done to humans what we, modern humans, colonizing humans, have done to them. We need to emulate their ethics. Pumas, Orcas, Rattlesnake, Wild Turkeys—they are ethical exemplars. The interesting thing is that while nonhumans have brains like us, have comparable capacities, they have not chosen to do what we do—they don't commit ecocide, genocide, and bring the planet to extinction.

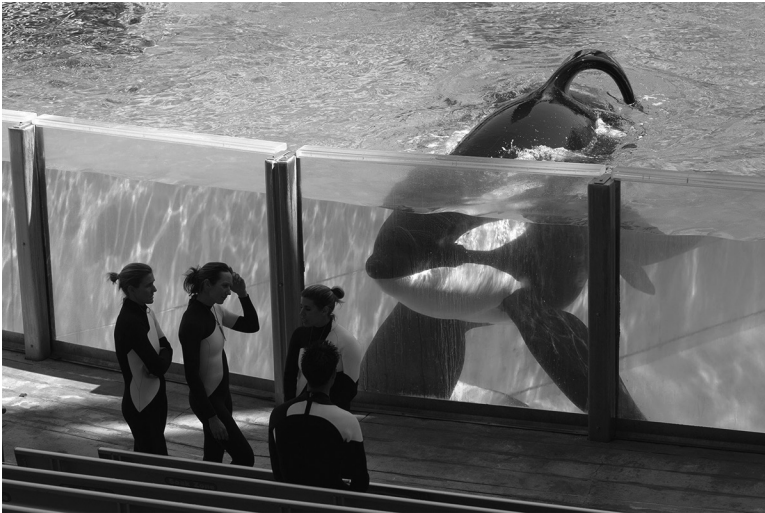
You have written a lot about personalities.

Cultures define a general sense of conduct, but it can come down to individuals whether they always follow those codes or not. That's not always a negative thing. I'd say that the egalitarian nature of the social

animals you cover shares a lot with the nature of nomadic hunter-gatherer societies: there's not an ounce of this automaton, coarse utilitarianism we tend to impose upon others.

There is room for joy, laughter, anger, love, and play. For me, it's almost like you hit this point where the science ends and the simplicity of how life should be just kicks in. Do you have any particular stories where you observed or had some experience that just seemed to break down all the scientific boundaries?

The best stories are those that I describe in the book— how Charlie Russell learned enough “Grizzly” to be able to nurture and teach orphaned cubs so that they could function and thrive in wild society, how Lawrence Henriques rescues and cares for injured Crocodiles and together they cultivate deep friendships, and how Fred Buyle, a diver who gains the trust and respect of Sharks because of his deep commitment to understanding them psychologically and with respect. Every day I see the Wild Turkeys, Deer, and Bears who live with such dignity, care and restraint. They are a constant role model for me.



As individuals, trauma and isolation can also cause us to break. A famous example is the Orca Tilikum drowning a trainer at SeaWorld. What happened there?

Tilikum killed his trainer and two other humans because of the horrible traumas he experienced. He was torn from his family as an infant

in the wild, forced live in an Orca-sized bathtub and then abused so he would perform tricks. Trainers and veterinarians force Orcas and Elephants to accept masturbation so that semen can be extracted to artificially inseminate females who are then raped with metal tubes. Birth rates in zoos and other captive settings are very low because of the trauma and stress. And who would want to raise a baby in such hell?

Humans who do these things to Animals are taking advantage of the prosocial respect and care of wildlife. Orcas, Elephants, Lions and other Animals could easily kill a human and yet very few do. No Shark, Coyote, Orca ever kills unless they have to. Carnivores are very parsimonious when it comes to killing because it is dangerous. An injury or expending a lot of energy puts the animal in a precarious position if the kill is not successful. The exceptions are those who have been subjected to terrible human violence. Tilikum is one of these exceptions.

There is not one incident in human history—and this includes Native peoples who have lived with Orcas for thousands of years—when an Orca harmed or killed a human. It is not part of their cultural ethic, and as Howard Garrett of The Orca Network posits, it is kind of a cultural taboo. It is not farfetched to assert that when Tilikum killed his trainer, he must have known he was effectively banishing himself from Orcadom. He knew that he was violating an Orca taboo and that he could never return to his home, to other Orcas, see his family again, and would die, as he eventually did, in captivity at a premature age. Other Orcas in captivity have committed suicide.

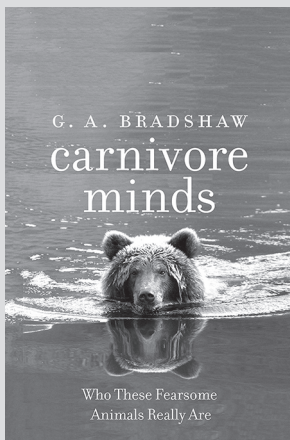
As Emily Dickenson wrote, “the plank of reason broke.” There are many cases of Elephants who, having been brutalized year after year, finally kill a trainer. When an Animal kills, it is out of sheer necessity whether it be madness or a matter of physical or psychological life-and-death. Animals are so much more evolved ethically, psychologically and spiritually than us.

You conclude Carnivore Minds with a sentiment that: “Science has given us a great gift by validating through reason what we know in our hearts.” I believe we still have so much bravado and arrogance to feel the realizations that seem to be boiling up at the surface; about animal cognition; about the universality of traits scientists had previously only granted to humans, are new knowledge. There is a lot coming out that’s exciting right now, not just in terms of ethology, but in how plants, trees, fungi, and whole ecosystems communicate. Yet these are things hunt-

er-gatherers intrinsically knew and understood.

How do you think we can fully break down these barriers where we stop being surprised about what animals, or plants, or fungi, might feel, think, or want and just accept the world as it is? I believe that narrative ultimately has to lead us back to our own captivity, which is a vital step to understanding our relationship to the world and ultimately doing something about it. Based on your own work with elephants and PTSD, can we truly understand and interact with other species on an empathic level without drawing the entirety of how we, as a society, regard the wild and all other life?

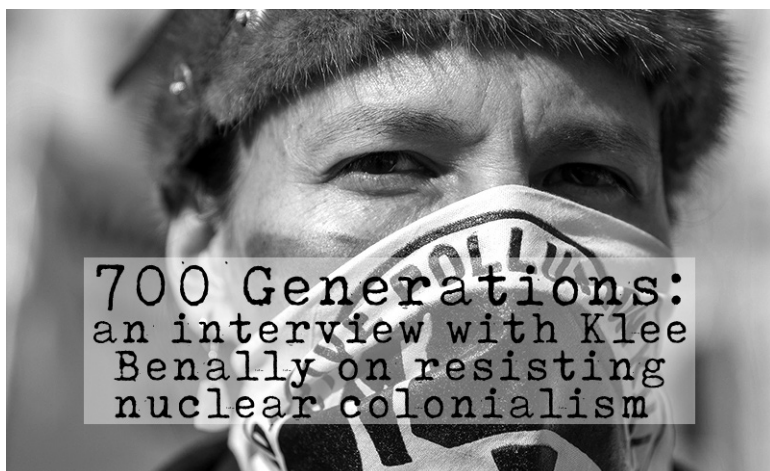
We can break down the barriers by exercising restraint, humility, letting go of control, and cultivating a willingness to be vulnerable. It is called love. What quantum physics reveals is that we live in a field of love. That is what Animals and Plants understand because they don't do to us what we do to them. They have the capabilities to make guns, commit genocide, craft computers and so on, but they don't and don't want to because all these things have caused separation and violence. Their world is a beautiful world. Just read John Muir. He captures the wild so well. The millions upon millions of Bees, Ants, Gophers, Skunks, and all other Animals and Trees are models for use to emulate.



Gay's newest book, *Carnivore Minds* (Yale UP, 2017), gets my highest recommendation. If you are at all interested in understanding the roots and reality of civilization's war on all things wild, this is among the most important. Its profiles of carnivores as social animals is as absolutely engaging as it is informative. And also horribly gut wrenching to face the brutish nature of the unquestioning omnicide and extermination that civilization perpetuates.

For more information on the Kerulos Center and the All Bull Elephants' Sanctuary (ABES), go to their website at <http://kerulos.org/>





Klee Benally is a Diné artist, filmmaker, musician, and resister. He is the project coordinator behind Indigenous Action Network (indigenousaction.org) and founder of Out of Your Backpack Media (oybm.org), a media-based Indigenous youth empowerment project. His impressive credentials go on, but I caught up with Klee to discuss the current Haul No! campaign against the Canyon Uranium Mine, White Mesa Mill, and their transportation routes. All of which come to embody one major facet of nuclear colonialism. Extending the long standing history of Western decimation of Indigenous lives and the Earth.

For more information on the campaign and actions, go to haulno.org.

Thank you Klee.

- Kevin Tucker

Can you give us some background on the Canyon Mine and the White Mesa mill?

Since time immemorial what is now known as the “Grand Canyon” has been held sacred by Havasupai, Hualapai, Yavapai, Paiutes, Diné, Hopi, Zuni, & Yavapai-Apache Nations. The legacy of resource colonialism in this region was initiated in the 1540s when Spanish invaded this area searching for gold. The establishment of the Grand Canyon as a park was initiated with the violent forced removal of Havasupai. In 1898, the Forest Supervisor of the region attempted to restrict Havasupai to a reservation within the Canyon, saying that the

Grand Canyon “. . . should be preserved for the everlasting pleasure and instruction of our intelligent citizens as well as those of foreign countries. Henceforth, I deem it just and necessary to keep the wild and unappreciable Indian from off the Reserve.”

Although uranium mining began throughout the region in the 1940s, it wasn't until the 1950s that uranium deposits were located around the Grand Canyon.

The Canyon Mine is a uranium mine located near Red Butte, a sacred mountain and Traditional Cultural Property only six miles from the Grand Canyon's South Rim. The mine is operating on Forest Service held lands under a Plan of Operations and Environmental Impact Statement that were conducted in 1986. At the time the Havasupai were not consulted. Development at the mine was started then but was halted when uranium prices crashed in 1992, the mine was put on stand by until 2013. It's also important to note that in 1989, a group known as EMETIC or the 'Arizona 5' was charged for eco-actions including cutting power-lines to the Canyon Uranium Mine. Energy Fuels Inc (EFI), a KKKanadian company, owns the mine and plans to extract uranium in 2018. A decision on the case is expected any day.

The White Mesa Mill is the only conventional uranium mill licensed to operate in the United States. EFI owns and operates both the mill and the Canyon Mine. The mill is located three miles north of the Ute Mountain Ute Tribe's White Mesa Ute community and six miles south of Blanding, Utah. The mill was built in 1979 to process uranium ore from the Colorado Plateau. In 1987, it began processing “alternate feed material” (uranium-bearing toxic and radioactive waste) from across North Amerika. Energy Fuels disposes of the mill's radioactive and toxic waste tailings in “impoundments” that take up about 275 acres next to the mill. The mill was built on sacred lands of the Ute Mountain Ute. More than 200 rare and significant cultural sites are located on the mill site.

There seems to be a general perception that nuclear power is a dead or dying player on the energy field. Even in ecological circles uranium has shrunk as a major issue even though it's certainly still here. How has that perception impacted the ability to do outreach on uranium mining and hauling issues?

I personally don't see a “general perception” of nuclear energy production as a dead or “shrunk” issue, but that could be due to the

regional awareness and organizing. I do see a lack of awareness regarding nuclear energy production, in the so-called “U.S.,” many folks don’t have an understanding that about 20% of their energy is produced by 99 nuclear reactors. Some climate “justice” organizations have not taken a firm stance against nuclear because they believe it’s a “clean” energy source. The Obama administration’s “clean power plan” incentivized nuclear energy production. There was a lot of awareness generated after the Fukushima Daiichi crisis that turned attention inward here in the so-called U.S. Unfortunately I think a lot of that momentum was diffused by what I consider as to be the first wave of anti-nuke organizers and orgs. The current make-up of anti-nuke activists hasn’t really changed for the past 40 years, that’s what I call the first wave. We’re shaking that up a bit by introducing more comprehensive frameworks to understand how the nuclear production cycle is connected to resource colonialism.

Regarding outreach, the consistent response we receive while organizing is that Indigenous communities are acutely aware of the impacts, there just is usually a lack of coordinated action or focused campaigns beyond the triaged toxic landscaping that the EPA and other agencies are attempting to call “clean up” regarding uranium mines that have been left abandoned for decades. But our outreach for the Haul No! campaign is focused in areas where communities have been addressing radioactive pollution for years, so my perspective is pretty concentrated.

In the twentieth century, half of all uranium miners died from lung cancer. The statistics for mill workers isn't really far off from that. Who wants this new mine? Why?

The nuclear industry currently asserts that mining practices and regulations have changed in the last 30 years, but there if you ask anyone in these regulatory agencies or corporation reps, if they can absolutely guarantee that our communities will be safe, and the answer is unequivocally “no.” The Forest Service refused to update its Environmental Impact Statement when the Canyon Mine was proposed to be re-opened in 2012, so their process is already using outdated standards. It’s not just mine and mill workers who died or suffer to this day, it’s the families who washed the clothes, who lived in houses built from radioactive tailings, it’s those who live within feet of abandoned mines, and those who continue to drink contaminated water. The nuclear industry and regulators very well know of the deadly

legacy, Indigenous lives are just disposable in this arrangement. The term “environmental racism” pales in comparison to what has and is happening, this is genocide.

Most all uranium currently mined in the so-called U.S. is slated for international export. Energy Fuel’s contracts for the uranium are primarily South Korea (KEPCO), there’s a global market that continues to grow so long and nuclear energy is considered a viable means for turning on the lights.



The overlap between Native resistance and uranium mining is a long-standing one. The American Indian Movement started at the same time as the Black Hills uranium rush, quickly catching the attention and intervention of COINTELPRO.

Leonard Peltier hit the nail on the head in 1976, stating “what was once called worthless land suddenly becomes valuable as the technology of white society advances ... [That society] would now like to push us off our reservations because beneath the barren land lie valuable mineral resources.”

Does this feel like a new issue? Is there a sense that anything has shifted within society at large that gives this fight more awareness or energy?

We do everything we can to connect the context of Indigenous resistance to resource colonialism, so it’s definitely not a new issue by any means. When there are global crises like Fukushima, societal shifts occur, our task has been to ensure that the grave threat nuclear colonialism presents to the world is understood and acted upon. In 1979 the single largest nuclear accident in “US” history occurred at Churchrock, New Mexico, just near the edge of the Diné (Navajo) reservation. This crisis is something we’re very familiar with in the “four corners” but it’s not embedded in our collective memories

enough to be the cautionary memorial that it must be. The fact that today we have more than 1,000 abandoned uranium mines and 22 wells closed due to high levels of radioactive contamination on our reservation reminds us that this is not a new issue. That there has never been a comprehensive study on the impacts to human health from this toxic legacy speaks to the disposability of Indigenous lands and life. The energy we get to fight this issue doesn't come from external awareness or energy, this is about survival for not just 7 generations, but 700 generations when we consider how long radioactive pollution remains deadly.

There's this tendency on the political spectrum to appeal to hyper-individualist values: how does this impact your property or your freedoms? It's as if seeing in terms of generations and community would undermine the cognitive dissonance that civilization demands, to really understand the impact that something like uranium has. Politicians and capitalists can just revert to whatever bullshit treaties and laws are on the books, liberals, libertarians, and revolutionaries can position it as just asserting the legality of ownership.

As you point out, this is active colonization, ecocide, and genocide: this isn't about any single individual and their wishes, it goes far deeper than that. I feel like that, outside of relatively intact or resisting communities, this message gets lost because this civilization is built on the throne of the Self. This campaign extends back generations and is looking, at the very least, 700 generations ahead. It's a crazy kind of situation, but I feel that breaking point between politics or campaign points and a living, breathing resistance demands cracking that mentality. Do you have any thoughts on how to really drive that home?

There's a lot to address here.

The ancestral knowledge I was brought up with comprises a mutuality with the teachings almost always being cautionary. It's beyond the scope of this interview to share some of the chronicles here, but this knowledge forms a framework for how we are responsible--not subordinate--to and with our relations. In other words it's a matrix of accountability that establishes cohesion for harmony in our cosmology as Diné. We also have a philosophical teaching of ʼaa hwo ajit' eego, or self-reliance and determination. With this we balance our responsibilities to each other (non-human beings and the land included) and our individual autonomy, again there's lots to address here and it's hard not to go into detail.

I am also not entirely convinced of the “individualism” of invaders to these lands, the branding of their collectivity has been that of white hetero-male domination and exploitation of Indigenous lives and lands. Though you may have many individuals expressing “Self above all,” they still comprise the material structure of one insatiable organism.

What I see in some of the political individualist tendencies today is more of a response to the violent alienation of the colonial dispossession of our beings. I understand those orientations a bit more as I see them everyday with young people where I live. That’s really where I prefer to place my focus. My interests aren’t in collectivizing settler “cultures” into a resistance force, but to intervene and attack the very ideas and structures that perpetuate settler colonial dispossession to begin with.

I have seen Trump get credit for a reboot of nuclear energy, yet the first U.S. nuclear power plant in nearly four decades got the green light from the Obama administration in 2012: that is a post-Fukushima decision. Is this not just indicative of the predatory and ecocidal nature of civilization?

If we understand nuclear colonialism as the systematic domination and exploitation of Indigenous lands and lives for the benefit of the nuclear production process, then we also understand that beyond a partisan issue, it’s part of the urge this social order has towards death. Nuclear energy was born first and foremost as an “apocalyptic” weapon. This was exemplified in the cold-war strategy of “mutually assured destruction,” it’s the only strategy possible with weapons capable of such mass scale destruction.

Do you see a strand through the resistance to this mine, mill and distribution with the spreading resistance to tar sand and natural gas extraction and pipelines?

The connecting points are at sacred places, these are the physiospiritual frontlines for our existence and the imperatives of resource colonialism and capitalism.

Gaia hypothesis creator, James Lovelock, claimed in 2004 that nuclear power is “the only green solution,” citing the endemic danger civiliza-

tion, as a whole, faced due to peak energy. Have any words for him and all the other environmentalists that followed suit?

They clearly don't understand the entire nuclear fuel chain, or if they do they willfully ignore the impacts of mining, transport, milling, enrichment, weapons and the waste. The same process to produce nuclear energy is the same process to produce weapons, this cannot be omitted from the equation. Greenwashing nuclear colonialism isn't a surprising move from an environmental movement that's project is sustaining unsustainable ways of life. Nuclear power is as much a "green solution" as GMOs are a "solution" to hunger or prisons are a "solution" to crime, the structures that precipitate the problems must be implicated as the causes of suffering that they are. If we understand civilization as the composition of contemporary industrial social order (with all its hierarchies) than we begin to understand "the danger" and then could begin to address it in more meaningful ways.

That ancestral and sacred places are being literally mined to fuel the prolonging of an endemic, yet apathetic, civilization; powering the technology that keeps us disconnected and ungrounded is an irony that can't be overstated. So long as we are living through screens, existing within social networks instead of community, how do you break this pattern and confront what is happening here and its implications?

First it must be understood that there is no dichotomy between spirit and nature for Diné (and many other Indigenous Peoples). By nature of defending the sacred we reconnect and establish a relationship that necessitates going beyond a technological interface. When we pray or conduct ceremonies, we use the tools our ancestors used, they are both contemporary and ancient in relation to how we carry them forward through these struggles. It's painfully plain to state that the pattern is broken when we reconnect directly, none of this can occur virtually through some powerpoint presentation or "facetime." It's more ironic to me when folx post a call to action on "social" media and someone responds with a picture of sage or sweatgrass burning and a statement of "thoughts & prayers." This colonial dissonance is part of what has been identified as spiritual war, but it shouldn't stop there, I think the "breaking" of any pattern has to be just that, a break, or in other words, intervention and attack.

True Crime Case Files:

FOR
EDUCATIONAL
PURPOSES
ONLY

Evan Mecham Eco
Terrorist International
Conspiracy (EMETIC)

Where: Arizona

When: 1987–1988

Evan Mecham had no supporters amongst Arizona's fans and friends of the wild. Mecham, a right wing bigot and John Birch Society affiliate, barely won the endorsement of his own Republican party when he ran for Governor of Arizona in 1986. In a three party election, he won with only 40% of the popular vote. A move he loudly attributed to god.

Openly racist and with a heavy inclination towards nepotism, his brief career as Governor now looks a bit foreboding: "On April 4th, 1988, Mecham became the first Governor to be impeached after being convicted of felony obstruction of justice and misuse of government funds."¹

Not one to score many points amongst eco-saboteurs and indigenous rights defenders, his name made a pretty solid base for a group of radical eco-bandits while forming a rather forced acronym, the Evan Mecham Eco Terrorist International Conspiracy. EMETIC: a substance that causes vomiting. Doesn't roll off the tongue, but appropriate enough.

EMETIC arose in the middle of a hotbed of mid-to-late 90s expansion into Arizona. No city makes sense ecologically, but Phoenix takes the crown. A concrete oasis in an arid land, surrounded by reservations as well as National Forests and Parks centering around the ancestral, sacred lands of the indigenous societies who were corralled onto the reservations.

So what does an expanding tourist town, three hours south of the southern rim of the Grand Canyon, do with those lands? Outside aquifer draining lawns, they built ski resorts and uranium mines. Those things were fresh on the mind of monkeywrench-prone Mark Davis when he set out to the 1987 Earth First! Rendezvous to recruit some help. There he met Peg Millett (as well as Ilse Asplund who was barely tangential to the group), whom he would later convince to take

part in actions against the Fairfield Snowbowl Ski Resort with further assistance from Marc Baker.²

Conversations turn to action. On October 5, 1987, EMETIC takes credit for “downing the pylons that supported the main chair lift” at Snowbowl. After smashing windows on two buildings, the group took an acetylene torch to cut supports on eight lifts. The local media refused to print the subsequent communiqué in part or full, but made numerous mentions that the action was in defense of the peaks the resort was built on. Peaks sacred to the Navajo and Hopi.

Liberals and environmentalists decried the action, as they are prone to do. The local native groups, however, did not.³

The local native and environmental groups were also involved in a battle over the Canyon Uranium Mine, roughly three hours north of Phoenix and fourteen miles south of the Grand Canyon. Again, sacred and ecologically fragile land: that local politicians and capitalists could make money while systemically desecrating spiritually and physically vital places for native populations almost seemed like an added benefit in their greedy eyes.

On September 26, 1988, EMETIC “toppled two power pylons and damaged 27 others, causing a blackout by severing five power lines leading to the Canyon Uranium Mine.” Further, “causing the shutdown of three operating uranium mines.”⁴ This included the Pigeon Mine that was the subject of the 1987 post-EF! Rendezvous action.

The Canyon Uranium Mine was vastly unpopular, as it should have been. As it still should be, considering that it remains open.⁵ Energy Fuels Nuclear, the group that owned and operated the mine, were only paying \$100 per year to dig in the National Forest for one of the most toxic substances unearthed by civilization.

On October 25, 1988, the group returned to the Snowbowl, this time they “nearly cut off the top portion of the highest ski lift tower with a torch.”⁶ Unfortunately, their luck would change on May 31, 1989. While in the process of using a torch to cut a utility line tower for the Central Arizona Project aqueduct system, a joint police-FBI team arrested Baker and Davis.

Millett had managed to evade the cops and Feds, walking out of the forest and hitchhiking the 75 miles back home. She would be arrested the next day. During a raid on the homes of Baker and Davis, the cops found evidence linking them to the Snowbowl and Canyon Uranium Mine. The three were charged with the arsons, as well as a March 14, 1986 attack on the Palo Verde Nuclear Generation Station that had taken down power lines built to feed the soon-to-be started

second Unit reactor. Actions that took place a year prior to EMETIC forming.

Later Earth First! co-founder and *Eco-Defense* author, Dave Foreman, and Peg's friend Ilse were also arrested, turning the group into "The Arizona Five." Foreman's inclusion in the arrests was an admitted stretch. He had given some money to Davis for one of the actions—which Davis subsequently lost—but his real role with the group was only in trying to fill some extensive "terrorist" plot that the FBI agents had tried to concoct.

Information on EMETIC is hard to come by. But even to this day, the FBI teaches about the case under the name "Thermcon," as in Thermite Conspiracy. FBI agents had been trying to sell the group Thermite—a pyrotechnic comprised of oxidized metals capable of inflicting serious damage without the assistance of heavy machinery or elaborate bombs—was central to a conspiracy that the agents wanted to present where the group was out to take down nuclear power plants.

That the central point of the investigation was a completely fabricated plot is why Foreman was able to ultimately walk away from the case, though silencing himself and alienating from EF! was a part of that process. Ilse, for her part, served a one-month sentence.

For the three actual members of EMETIC, Marc Baker served six months, Peg Millett served a five-year sentence, and Mark Davis served six years.⁷

What is crucial to the undoing of EMETIC is the role of FBI agents and informants. Informants were paid by the FBI in cash, drugs and forgiveness of past charges, primarily in the case of Ron Frazier, a convicted child molester.⁸

Davis' attorney found that "the government had 125 reel-to-reel tapes and 450 cassettes of recordings from household bugs, phone taps, and conversations taped by informants."⁹ FBI Agent Michael Fain, known as "Michael Tait," had infiltrated the group.

The effort was highly coordinated, using a combination of agents and informants until they could find a breaking point for each person. Frazier broke through with his persistence, but Fain is more troubling. He used a psychological profile for Millett, which included her past as a survivor of incest, to get her to open up and talk endlessly. Thousands of hours of conversations were recorded between the two of them. In an interview with Leslie James Pickering, she mentions how they bonded over talks and dancing, how if she wasn't married she would have been with him.¹⁰

While much of the world has changed in the decades since the brief existence of EMETIC, some things haven't. Snowbowl is still operating; having had its 2017 opening protested for using 100% treated sewage for the artificial snow covering the sacred mountains.¹¹ The Canyon Uranium Mine has gotten a spike in support in recent years from the government and corporations. While much direct action has fallen by the wayside and constant blanket surveillance has never been easier, the use of informants and provocateurs by governments, lobbyists, and corporations continues to rise.

There is no bottom in this story. There's much to be learned on the action side, but the same is equally true for understanding how and why it fell apart.

The night that Millett had managed to evade capture was, in her words, by listening to intuition and seemingly vanishing into the forest. She was arrested the following day when she turned herself in after trying to go about like nothing had happened. The FBI already had their information and their case. As individuals, all of the informants and agents were rejected wholly by at least some. It came down to persistence and profiling, the want to turn the dreamed up Thermcon conspiracy into reality, that led to the individuals going against their own intuition and letting the wrong people in.

With a bit more intuition all along, it's likely that none of them might have ever been caught.

Endnotes

1 Leslie James Pickering, *Evan Mecham Eco Terrorist International Conspiracy*. Buffalo, NY: Burning Books, 2012. Pgs 5-6.

2 Ibid. Pgs 33-34.

3 Ibid. Pgs 6-7.

4 Ibid. Pgs 9-10.

5 See the interview with Klee Benally in this issue.

6 Pickering, Pg 13.

7 Ibid. Pg 28.

8 Ibid. Pg 38.

9 Ibid. Pg 22.

10 This interview is the second half of Pickering's pamphlet.

11 <http://earthfirstjournal.org/newswire/2017/11/22/protest-disrupts-snow-bowl-as-arizona-ski-area-opens-with-100-treated-sewage/>



On Descartes' assumptions, the work of science, if not the destiny of life, was to widen the empire of the machine. Lesser minds seized on this error, enlarged it, and made it fashionable. And as often happened before in the history of slavery, the obedient slave first made himself indispensable to his master, then defied him and dominated him, and finally supplanted him. But now it is the master, not the slave, who must, if he is to survive, devise a scheme to recover his freedom.

-Lewis Mumford, *The Pentagon of Power*¹

Fake news is an insanely stupid story.

At the very least, it should be. But after a narcissistic, anthropomorphized internet troll beat out an old school, textbook neo-liberal for the United States presidency, it has become absolutely and begrudgingly unavoidable. It serves equally as a phrase used to debunk the exposure of true misinformation as well as a term for the misinformation itself. Somewhere in there is the punch line to a joke Marshall McLuhan might have made up.

As exhausting as the 2016 U.S. presidential race, election, and fall-out have been, there is a double-edged sword in this heaping dumpster fire of a stone: as depressing as the wide-scale immersion into technology is, it only clarifies the frailty of our modernized, hyper-integrated reality. As our rate of descent accelerates via the always-on intrusion of social networks, the vulnerabilities of civilization become increasingly simplified.

And in that process, the socio-economic fabric of a globalized

civilization becomes hackable.

My own knowledge of hacking is exceptionally pedestrian. I tend to find the age-old methods of fighting civilization in real life more palatable, less soul sucking. However, my knowledge or experience, as it turns out, doesn't really seem to matter too much in this equation. Those with vested interests or those who just want to sow discord alone are enough to get hackers to test their electronic might. When you live in one giant, yet awful, socio-technological experiment, it turns out that these are the conditions that apply.

As is becoming increasingly known, one of those vested interests is Russian president, Vladimir Putin. As a former KGB officer, he is no doubt fluent in the language of counter-intelligence and other assorted forms of covert socio-political disruption. His goal was fairly simple: to sway the 2016 presidential election enough to undermine faith in the electoral system leading to a stumbling of US political hegemony.²

The old 'fox-in-the-henhouse' approach to undermining a core mythos of government propaganda, the participatory nature of democracy, certainly has its entertainment value from an anarchist perspective. The only winners in this election, like any other, are the 42 percent of eligible voters who opted not to play along with the charade.³

Yet from an anti-technological perspective, what is crucial here isn't what Putin may or may not have wanted, but that it effectively worked.

The entire plot is like a failed reboot of the worst of 1990s excesses. That includes the casting calls. Take Donald Trump, an indisputable moron whose mouthpiece is Twitter, a medium built around quips in 140 characters or less, and put him up for what was recently the highest political office in the world. Trump, who is a convoluted character even for a reality TV star, pumps out Tweets that are as intelligent as Tay, Microsoft's failed 2016 attempt at an "artificial intelligence" chatbot. Like Tay, Trump does what the medium dictates: quickly echoes a chamber of lies, misinformation, racist-courting, self-serving douchebagery.

Unlike Trump, however, Tay was quickly taken offline.⁴

For his efforts, Putin effectively renewed Trump for another season. Only this time, he probably even surprised himself when that turned into a four-year contract.

As a patsy, Trump is a time-tested tool. His reality stardom was essentially being an off-color and off-colored face for corporate hier-

archy and exclusion, one that writers equally handed scripts to and had to create backstory and logic around the words and actions of the world's most infamous simpleton.⁵

So what does it take to make an unknowing jester presidential? Doubt. Play on fears. Add a veneer of strength to white men while their hubris cracks. In short: empowerment through negation. Take equal parts populism and cynicism. In a genre-defining move, the internet star creates a de facto position simply by attacking things they don't like. If the goal is entertainment, the willing spectator can superimpose their backstory.

I'm less interested in the particulars here: Trump was a fitting muse for Putin to push onto the palate of the conservative. He is narcissistic enough to legitimize fragile egos, yet daft enough to float on a seemingly ideological steadfastness without real comprehension. Many have mistakenly imposed intention to Trump: he's not smart enough for philosophy, he's just willing to say what it takes to get support that validates his brand at that moment. He may aspire to fascism, but only incidentally.

Ultimately, Trump is a placeholder. Not only did he not win the general election, he certainly didn't win it because who he is, but his voracity in whom he is not. He played himself as the wrecking ball and that's looking like a fair analogy. Putin may have ushered him into a horrible spy novel, more Austin Powers than James Bond, but what is important is the platform.

The platform: the truest form of fake media, the social network.



The allure of the social network is its ability to validate who it is you believe you are.

On the internet, no one can see beyond your screen. Its reach is infectious like a virus yet as superficial as a selfie. I have elaborated on

that more elsewhere,⁶ as has Nicholas Carr elaborated on how Google and social media parasitize our brains' neuroplasticity.⁷ But all of that merely sets our stage here.

I will never forget reading a review of Dan Egger's dystopian novel, *The Circle*. The premise of the book surrounds a social media company as it expands its circle of engagements to become the sole entry and access point for all your social and economic interactions with the world. The reviewer of this 2013 novel (written at a time when Facebook, Twitter, and YouTube were household names and Google was already used as a verb) claimed the unbelievable aspect of the novel was that anyone would go to one corporation to host all of their interactions and information.

Meanwhile, Apple, Google, and Facebook are fighting to see which one of them will get all the way there first. Their business plan centers on getting eyes on the screen and keeping them there. While Apple and Google certainly have done the legwork, Facebook seems to have the advantage. In 2014, Facebook made headlines by intentionally manipulating the feeds of almost 700,000 users to see how it emotionally impacted them.⁸

Not long after, they just started controlling the headlines.

Following Google's lead, social media channels wanted to give its users what they sought: validation of themselves. That comes in the form of validating the user's own worldview. To a sociopath like Facebook's CEO, Mark Zuckerberg, that amounts to algorithms. To the rest of the world, those algorithms are pre-determined and self-selected markets.

With that, information's role as a commodity gets a serious promotion.

In that world, there's a simple cycle of legitimacy: the more you use it, the more you need it. The more it validates you and your worldview, the more you want it. The more you interact with it, the more you trust it.

And use it we do.

Come for the conversation, stay for the entertainment. The integration is implicit. With Youtube, the autoplay feature keeps you watching. With Facebook, the news feed scroll never ends. With Instagram, you get notifications for likes one at a time to keep you from even having to refresh.⁹ Push notifications, headline alerts: another breaking news flash to light up your phone. The technological glitch: you don't need to recognize it; it just becomes accepted through practice.

Most could say this is co-dependence. I think parasitic is more appropriate.

From a marketing standpoint, it clearly works. So if your business requires getting clicks on off-site links, why wouldn't you use this market? If we're being gracious, a lot of what constitutes "fake news" is hyperbolic and dramatic web *content*. "News" is a stretch. A lot of it is a complete fabrication. Some of it is taking real news and skewing it. The market for content writers is a quickly expanding one. Search for web-based jobs and you'll find plenty of \$10 per hour content writing positions (tellingly demanding 1,000 or more words per hour). No expertise needed, just an ability to make it look legitimate. It's fleeting by nature and eventually the users expect the headlines alone to do the heavy lifting. A lot of it is just gossip, but the more it looks like legitimate news, the more likely it is to be shared.

And sharing is capitalizing. The more fantastic, the more shares. The more shares, the more a mere headline can validate your evolving righteousness.¹⁰ While there are certainly long-stemming undercurrents for this kind of infomercial/infotainment by media corporations, the line between verifiable reality and content blurs and distorts.

For the current and coming generations raised on social media, this is a particularly huge problem. Researchers were shocked to find that 80 percent of tested middle school students thought "sponsored content" ads were real news. High school students accepted memes or even just images as truth without looking for verification. When given the option, 75 percent of them didn't even know or acknowledge if a news agency's account was marked as verified.¹¹

That's the one that got me. Hearing about the impacts of "fake news" had me picturing elaborate web content: stuff that was meant to truly appear as news coming from a news agency. I was shocked to realize how much it really came down to memes: captioned pictures.

If Twitter's 140-character limit isn't bad enough, the meme is the most simplified form of relaying information. And it's intently stupefying. If a picture is worth a thousand words, a meme is for those who can handle about a dozen, tops. A lot of those memes originate from places like 4Chan, the virtual under-the-bridge for the online trolls.¹² A place where racism, misogyny, and boredom foster apathetic and nihilistic beds of budding shit flowers.

Here I feel compelled to reiterate my opening point: this is all just so insanely stupid.

Yet it completely works. It's not just kids being manipulated into

mindless consumption of the clicks. Adults, people who grew up before cellphones and Snapchat filters existed, take part in this orgy of shares and likes all the same.

And that's how we get to this election, its aftermath, and its underlying cancer: the validation of a shrinking worldview in an increasingly ever-reaching and intrusive world. Once again, those algorithms turn into economics. Cyber security firm Trend Micro recently evaluated the spread of fake news on social media and figured out how much these services cost. Want to throw an election? \$400,000. Discredit a journalist? \$55,000. Instigate a street protest based on misinformation? \$200,000.

Looking for a bargain? For \$5,000, you can get 20,000 comments. For only \$2,700, you can get a false story.¹³ Considering that the price tag for the 2016 election was \$6.8 billion, these costs are relatively negligible.¹⁴

Algorithms? Facebook has theirs; "click farms" have their own ones, too. A click farm is a service, you pay them money and they use an elaborate network of cellphones, SIM cards, and seemingly real social media accounts to boost and support content or to attack and troll it.¹⁵ To the average social media user, the accounts and interactions with these contrived accounts are indiscernible from real ones. Thrown into a virtual world of strangers, it either feeds confirmation bias, granting legitimacy through contrived popularity, or can serve to just overwhelm the holdouts until they feel pressured into giving in. Or they use the arguments to solidify their own positions, regardless of how absurd they might be.

It helps to be untouchable.

Seemingly devoid of consequence, that's how a group like ISIS can recruit disgruntled and indifferent teens and millenials. They're using high technology to make a more predatory variation of sending military recruiters to high school cafeterias. Likewise, the Alt-Right surge can rise simply by offensively playing the victim, using resistance to racist, xenophobic, and misogynistic dogma as an assault on their right to freedom of speech. The anarchist world isn't even immune: where indifference and apathy let a potentially fake group of self-proclaimed "wild serial killers," the "eco-extremist" tendency, to gain traction solely by appearing to respond persistently to "moralistic" attacks against them.

All this happens because these corporations got you to try them out and then found a way to make you stay. It's a vicious form of bait and switch. Try to get off of it and you'll find friends and family mem-

bers thinking your absence could have meant physical death.

If Putin wanted to undermine an election, he was granted the perfect platform, one readily being used by corporations and politicians to manipulate people and segments of societies wholesale. Again, why would anyone have access to that kind of technological power and think there's a good reason or use for it? For what other reason does this technology and predatory data exist? The government and corporations don't get to complain just because it wasn't given their paid-for application or because it undermined their interests.

It's ultimately an allegory for all of technology, but the application, since this can't be overstated, is really, really fucking stupid. If you need a barometer for just how crazy it is, take a look at the president.

Better yet, put down your phone. Shut down the social network. Then take a look around.

So I promised a silver lining at the outset. At this point, it has to be hard to imagine there is one. The reality and the degree to which all of us are impacted by social media's pull upon ourselves and those around us are pretty damn depressing.

It's a kind of confirmation bias for those selling negation only. A fairly effective one, too.

That silver lining is this: it is likely that the hacking of the 2016 election went well beyond just money funneled to click farms and sending likes to a megalomaniac willing to rant on a stage. The same hubris that led to all of our interactions and exchanges taking place online? It might have resulted in overextending the accessibility of something that is *still* believed to be untouchable (for no clear reason): physical voting machines and their networks.

I can trust that more will come of this over the coming months, years, possibly decade, but we know that in the case of the 2016 election that hackers tried to access the databases of at least 39 states in the US.¹⁶ It is thought that they didn't get that far, but the confidence here has to be waning. Even on the day of the election, PBS gave a rundown on how those voting machines and their networks *could* be hacked.¹⁷ It's plausible, if not likely. But what we do know for sure is that hackers tried *and* it would be hard, if not impossible, to know if they did succeed.

This is where it gets better: what we know is that there is little reason why people are going to willingly exit social media. The line for virtual persona suicides are short. But the more we become de-

pendent on so few technologies, the more likely it is that they are both vulnerable to and likely to be targeted by hackers.

The most recent rounds included cyberattacks from North Korea on personal computers using ransomware. The malicious software takes over the machine, releasing data only once its owner has paid, otherwise deleting or rendering the data all unusable.¹⁸ The Petya cyberattack, which hit Ukraine, Britain, and Spain hard, specifically targeted banks and airports.¹⁹ British Parliament was frozen after being hit by another cyberattack.²⁰

These kinds of cyberattacks include everything from petty extortion of movie studios to clearly political affronts. The more we rely on a singular device and service for all of our information, the more we solidify the likelihood that it could be hacked to pieces.

And in that regard, the nihilistic urges can be truly terrifying. Attempts to hack nuclear power plants have occurred.²¹ That's just a reminder that building such lethal technology was and is an insane idea and worse reality. On the other hand, hackers are actively attempting to hack the grid itself, proving, in the process, that such an effort could actually work.²² Considering the ways that this civilization is likely to play out, it's hard to imagine that this could really be the worst ending.

Of all the ways that civilizations have collapsed, there's still the chance for a nerd and their machine to be a first and last on that list.

What we see is that no matter how absorbed we become by the machine, the more fragile that substitute for reality actually is. As technocrats dream of smart homes and smarter programs, hackers have militarized household appliances with factory-default passwords. When control through convenience is the explicit goal of rampant and aggressive networking, access to and manipulation of that data is up for grabs. Be it boredom, resistance, or maliciousness, the tools aren't just there: they're centralizing and connecting on an absolutely unprecedented scale.

Blind faith resulted in willingly, yet unknowingly, lining the lifelines of this civilization in a row.

And to those looking to undermine this factory-default technocracy? Thanks for hacking.

Endnotes

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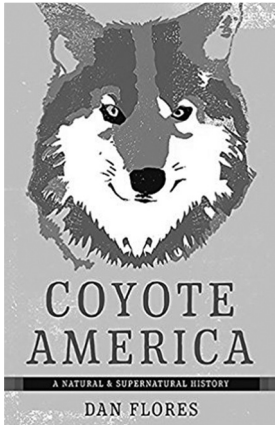
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REVIEWS



Curious river otter. Photo by Yank.



Coyote America

By Dan Flores

Basic Books, 2016.

Reviewed by Kevin Tucker.

If one's argument for civilization holds that wild predators should never roam in broad daylight through the boroughs of America's largest, loudest, most radically urban metropolis, then, truly, the end of civilization had arrived in paw prints in the snow.

(12-13)

Coyote America is a long overdue biography of *Canis latrans*, the coyote: the aboriginal wolf of the Americas. Reflected in native mythology as the Trickster, appreciation for the coyote comes in veneration of its cunning ability to evade destruction, adapt rapidly, and its resilience. To those who lacked an Old World fear of this wild canine, the coyote was the mirror of humanity. The coyote stands as a humbling icon of perseverance and a stark reminder of the potential of learning through deception.

The nightly chorus of howling coyotes, in Flores words, “is inseparable from the silvery wash of planets and the high moons of the winter night skies of this part of the world.” (81) Like Flores, it’s a symphony that I look forward to nightly. In its sound, quickness and intensity, it is a check-in for the coyote packs, a state of affairs meant to deceive its non-*Canis* audience. A single coyote has the ability to sound like many simultaneously. It is a wonder that I often feel unworthy of, but it isn’t meant for us, it is their communication. Yet it is a reminder of the undefeated wild of this world. A meaning that arises because of the context that civilization has created.

And that is a context the agrarian Europeans brought forth with gusto and sought to manifest upon the unsuspecting Americas: a new kind of totalistic war on wildness.

Europeans weren’t required to introduce the coyotes to civilization. The clearing of forests and decimation of landscapes at the hands of native civilizations in the Americas caused the coyotes to expand their habitats. Wary and lurking, they were willing to exploit the opportunities that cities afforded them. Coyotes are a “synanthropic species,” one of the few species that is able to adapt to urban

environments, no doubt drawn in by the rodents that follow human settlements.

Farmers though the pre-Columbian civilizers may have been, graziers they were not.

The genocidal wave of European colonization came at the behest of cattle and sheep grazing agrarians. They came from a deep lineage of pastoral hatred towards wildness. Targeting wolves and other predators for extermination had become an unquestionable gospel. Wildness was a threat on a far more anthropomorphized level: undomesticated and undomesticatable dogs and cats were killed on principle. That is a principle that would come to paint the "prairie wolf" (as the coyote was originally known) as everything from "the archpredator of its time" to, in the words of Mark Twain, "spiritless, cowardly," and in the heat of anti-communist fears, "the Original Bolshevik."

In that light, it can be hard to see how the story of the prairie wolf runs a parallel with humanity. Like us, coyotes survived the end of the last Ice Age through their resilience. As keystone species, large and small, failed to adapt (including a number of larger bodied wolf families), the coyote was able to make the same kind of swift transition as humans. Hunter-scavengers, like humans, the coyotes adapted their carnivorous diets to include foraging. They shrunk down in size. They doubled down on their social flexibility in a "fission-fusion" framework: their societies were made up of capable individuals who could come together or split apart as necessary.

As Flores reminds us, "Coyotes share this adaptation with very few species, but they do share it with us." (35) Intensely social though they may be, they lack the rigid structure that many predators typically have. Particularly wolves.

This is an important point. America, as a nation and as a notion, was founded on the obliteration of all things wild. Existing communities, human or non-human, were immediately subject to wars of extermination. The Manifest Destiny of such godly citizens decimated the land and all tied to it. This was a war that would worsen and, despite degrees of "enlightenment," still continue to this day. Being the least understood of the native predators, the most likely to exploit human encampments yet least likely to be tamed or approached, coyotes were parceled into the attempts to eliminate wolves.

The result was a campaign that brought almost all native wolves to, or on, the edge of extinction. One that saw the landscape littered with corpses of horses brought out and shot to become "bait stations," where their bodies were covered with strychnine and other absolute

toxins in a biological war against predators that also nearly eliminated the swift fox and numerous birds of prey.

The details of this campaign against wildness, one that continues, are laid out by Flores in the chapter 'A War on Wild Things' that is both terrifying and what I would consider absolutely necessary reading. Not since reading Paul Shepard have I found so much in a single chapter, too much to summarize here, but this is the sickness of domestication. It is the product of a worldview based on economics: where utilitarian thinking can accept the eradication of millions of wild beings as a necessary part of cattle and sheep ranching.

It is a war on wild beings that has been shaken by a simple reality: while numerous species have gone or gotten dangerously close to extinction by this very same predacidal campaign, the coyote has thrived. This is resilience. And it is here that the coyote feels like the proper flag-bearer of the primal war: it is so ecologically attuned that it will outsmart and outflank attempts to eradicate it.

In biological terms alone, the coyote is exemplary. Coyotes "possess an autogenic trait that allows them to assess the ecological possibilities around them. If not persecuted, they saturate a landscape to carrying capacity, then usually have small litters that produce only a couple of surviving pups." This is an amazing ability best exemplified in numbers: "The average coyote litter size is 5.7 pups, but that number can range from as low as 2 to as high as 19." (105) This is what coyotes are assessing when they listen carefully to their own nightly choir. Their response to threats is immediate: breed more and more often.

Lacking the kind of social structure and hierarchy that typifies wolf packs, the loss of alpha coyotes results in the splitting off of beta coyotes, thrown into estrus earlier to breed their own packs. The more coyotes killed, the more they split off and breed larger packs from more mothers.

It's hard not to be moved by that resilience and drive.

This is a species among many that civilization has actively sought to eradicate.

The federal government, the Forest Service, the Department of Agriculture, all the way up to presidential mandates have sought to demonize and actively destroy coyotes. Without evidence, the coyote was portrayed as first coming for your livestock, then your morality, and now your pets within the hallowed confines of the city. As the coyote becomes a common visitor and hunter within American cities, that impression is only slightly eroding. Environmentally aware

individuals aren't exactly keen to demonize a canine, but that hasn't stopped merciless coyote hunts, including award-based mass kills, aerial gunning, the use of predacides, and the perpetuation of trapping for furs, from occurring.

So long as civilization remains a plague on this earth, this is the other side of the domestication process: the eradication and vilification of the wild. And in spite of all of that, in spite of thousands of years of agrarian sickness unleashed in force over hundreds of years, the coyote thrives.

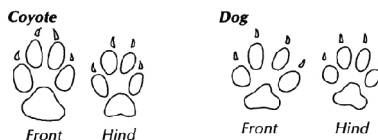
The trickster laughs last. It is the icon and mirror for the refusal of domestication: willing to prey upon its creations without entertaining a life of captivity. It learns quickly and evades effectively. It has survived. And it will survive.

If we're willing to pay attention, we might follow its lead.

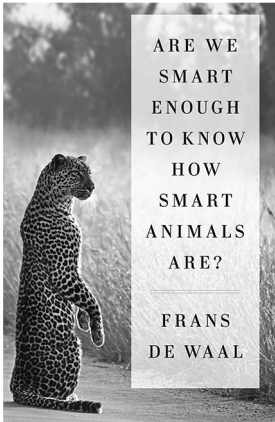
And for such a righteous being, what Flores gives us here is an endearing biography of an amazingly wild and resilient animal. One that doesn't permit us the comfort of pretending that its survival has anything to do with our good will: it solely comes down to its own ability to overcome what it is that we throw at it.

Like many who see the destruction civilization has imparted on the wild and turns their eye towards studying other species, there's a kind of biologist's holdover that accepts the domesticated narrative of humanity as an endemic one. There are echoes of the sociobiologist's variation of human nature: one lending itself towards hierarchy, warfare and decimation, a worldview that was surely created by domestication rather than given by evolution. Such a perspective can make it harder to see beyond the city, to accept that the lights won't always be on, and that our co-habitation with coyotes may soon have to change its form by necessity.

But that doesn't detract from its message and urgency. This is an important book. As civilization fails to continue holding the world hostage, it will be the trickster who helps us find our way back home. The coyote, the victim of a war of extermination, will laugh as we stumble upon our own wildness: a subtle reminder that we stupidly forgot who we have always been. As I hear the late night choir singing to each other, it is the humbling we desperately need.



A Tale of Two Inquires: What Humans Say About What Animals Think



Are We Smart Enough to Know How Smart Animals Are?

Frans de Waal

W.W. Norton, 2016.

Beyond Words: What Animals Think and Feel

Carl Safina

Picador, 2015.

Reviewed by Kevin Tucker

Animals should be given a chance to express their natural behavior. We are developing a greater interest in their variable lifestyles.

Our challenge is to think more like them, so that we open our minds to their specific circumstances and goals and observe and understand them on their own terms. ... True empathy is not self-focused but other-oriented. Instead of making humanity the measure of all things, we need to evaluate other species by what they are.

– Frans de Waal (275)

And so concludes pioneering ethologist and primatologist Frans de Waal's latest book, *Are We Smart Enough to Know How Smart Animals Are?* I think this quote in particular sums up not only my conflicting thoughts about de Waal, but about the role that scientific based perspectives can have on our path back to wildness.

Here is a pioneer in the recognition and respect for animal cognition and intentionality (ethology), de Waal's understanding of reconciliation was necessary, not only to change views about violence and warfare amongst non-human animals, but humans as well. It stood in stark contrast to the tooth-and-nail narratives that World War II injected into biologists of a still emerging field. Within this realm, there is so much to this book, as with all of his others, about really understanding animals within their *umwelt*, the worldview of each particular animal.

The central question here pertains to the history of animal cognition studies and awakenings: how flawed has the search for under-

standing animals been weighed down by the burden of holding each species to the measure of humanity? Anthropocentrism, as we have all sadly seen, is unfortunately an endemic pathology. That is if it is left unchecked. In terms of checking, de Waal is really our “man on the inside,” one of the people shaking up the institutions from within, asking important questions and pushing to understand the world on the terms of others. It’s an important path, but it’s not an easy one.

So here is my central issue with de Waal, one that hovers tightly over this book: as a primatologist, his work comes out of the Yerkes Primate Center outside Atlanta. His primary subjects are primates held in captivity. While his ideas about animal testing boil down to not wanting to subject primates to testing more rigorous than any human would volunteer to, far more liberal than his colleagues, it still takes the measure not only from humans, but civilized ones. That college students might not be so conflicted about captivity shouldn’t be the permissible level of understanding for how to engage with other species.

Whether he arrives at this point from the path of defeat or victory is something I can’t speculate on. But the work at Yerkes involves all levels of vivisection, primarily subjecting their captive population to diseases like AIDS and tuberculosis or addictions to substances like heroin or cocaine to attempt to find paths for treatment. How behavioral studies at such a facility can simultaneously lead to groundbreaking books on the importance of empathy and the continuation of the most aggressive forms of subjugation baffles me beyond words.

This is our disconnection.

This is how we survive in captivity ourselves: we fail to recognize it. A point not lost on de Waal who regularly contrasts research on captive or wild populations. For de Waal, the limits of fieldwork on wild populations lie in the inability to draw “firm conclusions”: the lack of control.

Mere observation doesn’t offer much of a peek into the child’s mind. Instead, we bring the child into a room and present him with a coloring task or a computer game, let her stack wooden blocks, ask questions, and so on. This is how we measure human cognition, and it is also the best way to determine how smart apes are.

Is it though?

One may encounter wild chimpanzees who crack nuts with stones,

for example, but it is impossible to know how they discovered this technique or how they learn it from one another. For this, we need carefully controlled experiments on naïve chimpanzees who receive nuts and stones for the first time. (174)

Do we?

Sometimes we watch what animals do of their own accord, while at other times we put them in situations where they can do little else besides what we want them to do. (275)

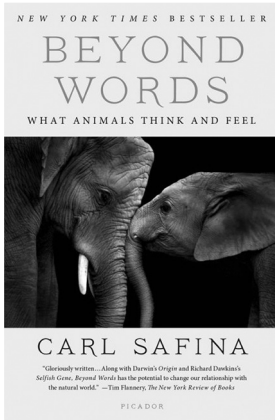
This is where de Waal falls apart.

He advocates for understanding animals in their *umwelt*, but shares the enthusiasm for keeping them in cages under “humane conditions.” He advocates in the end, ostensibly, for observation based on animals in their natural settings. There is even a recognition that for hunter-gatherers, the “human-animal relationship” is “rather egalitarian”: “Hunters exercise minimal control: they anticipate the moves of animals and are impressed by their cunning if they escape.” (274) A cage-free relationship.

This is a loss of knowledge and understanding, but our disengaged reality becomes the accepted one. De Waal writes, “for many people animal intelligence is self-evident, science never takes anything at face value.” (pg 265) “We want proof,” he adds. That is where this book steps in. Science attempts to piece together the ‘bigger picture’ by isolating and dissecting the world and its inhabitants. That the results are fascinating and confrontational is not an achievement, it should be humbling. I think de Waal would agree on this point, but it is hard to accept the path taken.

And it contrasts starkly with Carl Safina’s approach in his absolutely excellent book, *Beyond Words*. Safina’s observations are almost entirely on wild animals, invoking his dogs and research like de Waal’s work largely anecdotally. And the hang-ups that de Waal carries? Safina, no less a scientist in profession, is far more willing to set them aside. Why? Because he’s seen and experienced enough to allow his rational mind to accept the probability that this sterile scientism is discounting too much probability.

When breakthroughs happen, they don’t come as a confirmation of what we already know. They come as something unexpected, hard to fathom, something producing puzzlement, demanding new ex-



planations. They come as things that many people dismiss or scorn. Until they turn out to be true. So while I am wary of believing, I'm also wary of dismissing. The many stories have pushed me into the "I just don't know" category. And it's pretty hard to get me there. (373)

De Waal has written his book to question the validity of humans as the measure. Safina has written his book explicitly to take the perspective of "a world in which humans are not the measure of all things." Furthermore, in "our estrangement from nature we have severed our sense of the community of life and lost touch with the experience of other animals." (2) When we cease to be the subject, it becomes possible to look from the outside in. He sees de Waal's question and raises it: can we see ourselves from the perspective of other animals?

When I myself look at other animals, I almost never see an otherness. I see the overwhelming similarities; they fill me with a sense of deep relation. (362)

Safina's book is full of empathy, both for the wild beings and communities that he observes (primarily centering around elephants, wolves and killer whales), and the plights that they and all wild populations face at the behest of our self-enforced conquest. A conservationist by trade, he is interested in taking these observations to stop our wanton destruction of the world, a theme that is central to all of his other books, including his enraged account of the Deepwater Horizon blowout of 2010, *A Sea in Flames*.

So in response to de Waal's upholding of the laboratory, with its isolation and control, stands Safina in stark contrast:

Sometimes, rather than "testing" animals in contraptions and contrived setups where they can't be who they are, we might simply define the concept we're interested in, then watch the animals in free-living situations appropriate to their lives. Do they show an understanding that other hold different thoughts and agendas and can even be fooled? Yes. It's happening all around us, twenty-four/

seven, blindingly obvious. But you have to have your eyes open. Lab psychologists and philosophers of behavior often don't seem to know about how perceptions function in the real world. I wish they'd go outside, watch, and have some fun. (249)

Pretty solid advice, I'd say.

I take it as a given that the relationship between anarcho-primitivists and scientists of all stripes (social, ecological, or biological) is one of trepidation. I reject the scientific worldview: that the "natural world" is a problem to solve; that there are understandable answers to questions that extend beyond words. I unflinchingly point out that we all need to absorb ecological perspectives in every realm of life: a hope for a more holistic and symbiotic view of how we are connected.

As captives ourselves, we *should* marvel at the way in which wild beings interact with each other and their world. We should not only learn from them, but also take that vital step from observation to integration with wildness. To me, that is the line between the scientist and the hunter-gatherer, the hiker and the rewilders: is our intent to understand the choir in appreciation or do we seek to join the harmony ourselves? Are we content in captivity or do we want out of the cage?

For us to get there, we have a long path, made worse by having to undo the perpetual lessons of domesticated living and seeing. In a long view, using any strict allegiance to science-based deduction is counter-intuitive. Not because our wild relatives didn't use deduction, but because they didn't isolate the world into bite-sized pieces to over analyze while being removed from context. Science didn't arrive out of nowhere. De Waal jokes in his book about how not having a theory of gravity hasn't keep squirrels from falling or birds from flying. All living beings are constantly piecing our world together, but only the scientist upholds each revelation as a miracle.

Or worse, as an achievement.

And there is a reason for that, the civilized must be able to replicate and reproduce the world to dominate it through technology. It is not enough to understand gravity if you seek to build flying machines that defy it. If you want to create and launch a technological innovation that allows you to kill people at a distance, you need the tool to permit the distancing implicit in it. Gravity must become a factor in the equation of the machine.

It is the footnote to the lineage of science that information found

along the way about how the world functions and exists on its own terms comes out at all. The goal of this path is the arrogance of the colonizer, the bravado of the manufacturer, and the pedagogy of the inventor; we seek to understand the world to subject it to the whims of the civilized. Emphasizing that point, Safina reminds us that Western civilized people “discovered” whale song while Navy officers were listening for sounds of foreign submarines in the ocean and then leaked those recordings to biologists.

Meanwhile, Arctic hunter-gatherers would paddle to open areas of water and lean their heads against wooden oars dipped into the water to amplify those ancient (and constantly evolving) songs.

That is why ethologists study the way primates in captivity handle being given food individually. Or why elephants are having X’s drawn on their faces before having to stand in front of a mirror to be judged on how quickly they do or don’t acknowledge it. (“Maybe a mirror is mainly a test for which species is the greatest narcissist.” Safina, 279) The problem here isn’t that de Waal and his lab bound colleagues are coming to understand and uphold intelligence, cognition and empathy with other species, it’s that their challenge to anthropocentrism is just reinventing the hamster wheel.

This is a problem. The same reasons I uphold de Waal’s findings, the fascinating anecdotes and tales of cognition we might have considered impossible among other species, are the reasons I have trouble getting through it. When the reality of domestication becomes apparent, any attempt to slowly pull back the curtain while science steadies the hand just feels like well-intentioned half measures that can never fully shake us out of our lulled non-interaction with wildness. It is capable of confronting our captivity, but not breaking it. It moves inches and we need to move miles.

Like the wild populations that Safina is spending times with, he certainly covers far more miles than de Waal.

There is a theme in these discussions that harks back to the conversation we were having in *Black and Green Review* no.2, discussing the nature of symbolic thought and interaction. Following the observations of both hunter-gatherers and rewilders, there’s much to be said about understanding interspecies communication, particularly the non-uniqueness of what might be considered *language*. Breaking down the barriers between brain-size and function or the primacy of civilized communication are important steps to dissolving the anthropocentric underpinnings of domestication. But if so much can

be observed by populations and communities that are simply willing to believe we aren't the smartest or the best species (or even the only one), then how does that jive with research based on captive populations or forcing the ancient wisdom of elephants with pedantic comparisons to how human children play with toys?

It is in this regard that de Waal is at the cutting edge for the scientific community. He's willing to grant and exhibit the impressive levels of cognition not only in non-human primates, but also in numerous mammals, birds, invertebrates, insects, fish, and basically all levels of sentient life. Make no mistake; he speaks of this in terms of veneration, which again makes the work on captive animals only more confusing. He wants to confront the level of godliness that we've granted ourselves. He wants us to stop allowing ourselves the privilege of being the measure of cognition. And in those regards, he is ahead of his game.

But does that go far enough? I don't think so. I think there's a lot in his work. I certainly will continue to reference it. But there needs to be a deeper level of questioning. Why is it that anything that isn't proven in a lab is considered invalid? Why is a level of familiarity required to grant respect or worth on another species or even just other communities? We should be seeking to break the self/other barrier, not just adjust the height of it.

De Waal still has his limitations. Going back to the discussion in *BAGR* no.2, de Waal grants that non-humans are capable of communicating complex scenarios both within and beyond their own species through verbal and non-verbal cues. This means real, hypothetical and possible situations that require extensive recall, contextualization, the expected motives or motions of other species, but also past and future tense. But he stops short of calling this *language*, admittedly kind of a back handed swipe at the overarching emphasis science grants in terms of language and human uniqueness. Yet this example stands out to me, it is easier to choose which boundaries are worth pushing and which aren't. It is our measure that is still calling the shots here.

That said, I find the discussion fascinating for all of the same reasons I find the research infuriating: we have so much to learn. We have so much to unlearn. The route will never be perfect and it will inevitably require taking notes from methodological approaches that are frankly counter-intuitive towards an integrated engagement with the world. Perhaps that is the important lesson here, not only what we've learned, but how that knowledge helps break down the arbitrary

blindness we put on the world.

And in that regard, it matters less if what de Waal seeks to know and how I seek to live become divergent paths. I don't expect everything I interact with to be headed in the same direction, and I hope that the unreality of that expectation is a given. But goddamn, can't we at least agree that empathy should make you want to at least empty the cages?

It is here that Safina comes through in spades. His work on animal communication and language has more questions than answers, but the baseline of human language is drawn into question. I think de Waal would agree with Safina when he states: "Speech is a slippery grip for measuring thoughts." (82) Language, as we uphold it, might be completely arbitrary. It is the ability to convey thoughts, be they simple and immediate or complex and distant, that an over reliance on language may cause us to overlook: "authentic thoughts arise first; then we paste words onto them. Words interpret thoughts. Thoughts come first." (82)

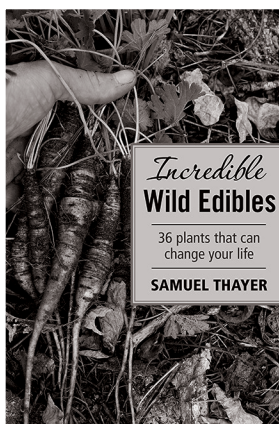
Safina writes at length about elephant words and syntax. He shows that killer whales have names and will use them in conversation, even when a whale being discussed isn't present. Translating the language of other species, if possible, may be a long way off. "For now, what elephants are saying and understanding is more sophisticated than is our understanding of what elephants are saying." (94)

Underlying the discussion about the role of symbolic culture in the human timeline is really a simpler question: when did we stop seeing ourselves as animals? How? Why? It's a difficult question and surrounds a lot of speculation peppered with concrete anchors for changes in human activity. We can reflect on those, because each anchor is instilled in our own domestication process. We see them in our own lives. By learning to step outside ourselves, we can undo them. We can re-wild. Our plague is rooted in believing in human uniqueness, that we are different. In believing that we can be freed from our own animality. "We impose a self-isolation that deprives ourselves of experiencing so much of the world's persona." (393) Which begs the question: "Why do human egos seem so threatened by the thought that other animals think and feel?" (269)

There are questions here that we may never be able to answer about language, but, as Safina brilliantly shows us, perhaps those questions aren't the important ones. Before we worry about what animal languages look like, we have to get off our own pedestal and recognize that animals do think, talk, want, desire, and communicate.

Trying to peg down grammar within other species may well be possible (though I would say we have), but how much of that is simply trying to translate a foreign language. Wouldn't it make a hell of a lot more sense if we just learned to understand it within its own context instead of transpose it onto ours? That, after all, is how language went from a means of communication to a tool of domination. We removed it from the cacophony of harmony where it arose. We isolated our voices until we only heard ourselves. Until we stopped seeing and feeling the community of wildness that surrounds us.

What is most important about *Beyond Words*, a point that far exceeds de Waal, is that our removal is only temporary. Contextual. We can break it, but to do so, we have to start looking, feeling and seeing. In that regard, there are few starting points more powerful than this book.



Incredible Wild Edibles

By Samuel Thayer

Forager's Harvest, 2017.

Reviewed by Kevin Tucker.

No doubt, a number of our readers will rightfully be familiar with Sam Thayer's work. *Incredible Wild Edibles* is a continuation of the catalog he's been amassing with his previous books, *The Forager's Harvest* (2006) and *Nature's Garden* (2010). To label the books as "field guides" feels wrong. It's not necessarily incorrect, but while Sam is unmatched in terms of diligent research and digging on each plant, his passion is infectious. It's more like a series of love letters to wild plants: 36 of them in this case.

For that alone, this book, along with his others, is perfect. However, there's more to it than just that. As permaculturalists and environmentalists expand their garden-based views into the world of ecology, you see an increase in trying to cultivate the wild through management. In the last decade in particular, I've seen a growing post-modernist politicization over things like the discussion of native and invasive species. It's led to a lot of awkward situations where I, as someone who is all for propagating plants for native pollinators, can't figure out where the person I'm arguing with is coming from.

The problem, one that I had apparently overlooked, is that in the

world of wilderness management, you get the same kind of agrarian control that I've always loudly opposed. In that view, all the scathing critiques that should exist for a colonizing culture are offset onto the wild plants that colonizing cultures incidentally carry. I may be baffled about the militarized "war on invasive species," but it doesn't mean it doesn't exist; it just wasn't a part of my worldview.

It is, however, an area that permaculturalists and gardeners seemingly run up against often. Being a debate that I have no interest in either side of, it gets hard to have a discussion when it all boils down to disconnected philosophical positions pretty quickly with no middle ground in sight.

Fortunately, we have Thayer. Thayer doesn't just profess love for foraging; he makes a manifesto of it. He cuts through the aspects of control with ease. In the introductory essays, he lays it down thick. Pointing to what he calls "Nature schizophrenia" which:

posits that there are only two ways of relating to Nature: destroying it and replacing it for economic gain, or leaving it untouched. These approaches may seem like polar opposites, but in fact they are the right and left hands of alienation, working together towards annihilation. As long as we believe that Nature can be only a virgin or a whore, marriage will elude us. (36)

For the forager, the enemy isn't a life with glyphosate (primarily in the form of Roundup) and management, but of not sitting on the fence: immersing in the wild instead of just dictating it. The philosophical debates about terminology fade in light of practicality and barebones reality: "Invasive plants are not swallowing ecosystems as corn and soybeans have, but they do pose real and serious dangers to native communities." (22)

There's a never-ending cycle with chemicals: the more they are used, the more plants become resistant to them. The more resistant, the more devastatingly harsh the chemicals, and this is how we wind up with glyphosate being sprayed everywhere and anywhere without a care in the world. Or a care for the world.

As Thayer points out, "the stupidest thing about overusing herbicides is that applying them to perennial communities *guarantees* the proliferation of annual weeds—the very thing herbicides were designed to get rid of." (35) Eating wild takes you out of your head and puts you back on the ground. No philosophy or glyphosate necessary. From the forager's perspective, you can see the impacts garlic mustard

and herbicides have. It's easier, healthier and tastier to eat the invasives while being more effective on a practical scale and rewarding on a personal one.

Foraging deflates the pervasive "Nature schizophrenia" because—for lack of a better term—it's a reminder that we are not separate from Nature and it is not passive, fragile and weak. So when confronted with the idea-laden field of gardeners and agriculturalists, it's best to remember that there's another, vastly better option: the life of the forager.

With hands in the soil, it's a lot easier to find balance: "Not because garlic mustard is evil, but because spring beauty is good." (23) And to that end, there's no better advocate and guide than Thayer.

Now let's get back to talking about the truly most threatening plants: wheat, corn and soy.



One of the aspirations of technologists has long been to create a form of technology that humanity could interact with based on human speech. Being able to talk to a machine, have it understand and then respond with some useful bit of information has been on the engineering to-do-list for well over half a century.

In the early 1960s, IBM introduced the IBM Shoebox. This was the first digital speech recognition tool and it recognized a total of 16 words and the digits 0 through 9. About a decade later, Carnegie Mellon demonstrated the Harpy Program which could understand about 1000 words. In 2001, Microsoft introduced speech recognition for their suite of Office applications (Office XP) and again, nearly a decade later in February 2011, IBM's Watson was able to understand answers read to it on the television show, Jeopardy, and it responded

with proper questions well enough that it claimed victory over its human competitors.¹

Since 2011, the rise of speech manipulating technology has grown rapidly. Only a few months after Watson's victory on Jeopardy, Apple launched Siri – the speech recognition “personal assistant” built into their operating systems, most notably on the iPhone. Since Apple's commercially successful introduction of Siri, several of the largest technology companies in the world have given rise to a market of what has become known as “digital assistants.” With Google deploying “Google Now,” for products running the Google Android operating system, in July of 2012, and Microsoft introducing “Cortana” in April 2013, a new digital gold rush was on to capture the burgeoning market of interactive technology driven by human speech. However, the largest and most successful human speech recognition product to date was introduced late in 2014. This product is Amazon's artificial intelligence (AI) and speech recognition digital assistant, Alexa, which was first packaged in its “smart speaker” named the Amazon Echo.²

What is Alexa?

It wasn't until June 23, 2015 that the Amazon Echo was officially launched in the United States and it was clear from the start that what the Echo was offering was a conduit for the Alexa AI which customers were interacting with through the device. It wasn't so much a “smart speaker” that you could command to play back your favorite tunes, as perhaps Alexa's first patent demonstrated.³ This was not only an assistant who you could interact with to control various IoT (internet-of-things) devices, it was an assistant that could transform the way you experienced life in the physical world.

Two days after the Echo was launched in the US, Amazon introduced the “Alexa Skills Kit.”⁴ This kit is something like a programming development environment and market place where developers and users can publish and utilize applications to enable add-on functions to Alexa. For those familiar with Apple and their App Store for products such as the iPhone, these “skills” are similar to applications you can install on your iPhone to perform specific functions. Although one key difference with Alexa is that you are installing nothing on the local device using the Alexa AI. You are enabling these skills “in the cloud” and so all data passed to an Alexa Skill, possibly all data passed to Alexa, is manipulated in the cloud. Likely that data is stored

and used to inform the Alexa AI in general, and as Rohit Prasad, vice president and head scientist for Alexa at Amazon stated – “The inspiration for Alexa was cloud-based AI.”⁵

One of the selling points for Alexa, according to Prasad, is that AI is able to do certain things better than humans can. Naturally, when the civilized world hears about such things, one of their first concerns is their occupation. That which sustains the civilized world’s being, production and consumption, sees such claims as threatening to its very core. But to allay those fears, Prasad calmly instructed, “AI is able to do certain tasks better, so you can focus on something else. Now is the time to embrace AI. Ask yourself, if you can get AI to do the task, what other skills would you acquire?” Yes, of course! This is always the reply from those who gleefully embrace “technological progress.” Why shed a tear for what you may lose, think of what could potentially be gained! By the time you have realized what has been lost, any contemplation of what was lost will be met with well-established refrains of “that’s just the way it is,” “it’s always been like that” and “you can’t go back.” Once technology has a foothold on those “old skills,” we can become dependent on technology to provide for us. Those skills we previously cultivated are subsequently seen as unneeded. They become “a waste of time” and technology pushes us forward by supplying its own answers to the “what other skills would you acquire” question. The skills you acquire are the skills needed to further your servitude to technology.

So what does Alexa do?

It’s amazing how much you can get done by talking to a 9.25-inch-tall cylinder. Amazon’s Echo home speaker and the device’s built-in Alexa voice-activated assistant spring into action any time you call out, “Alexa.” You can cue up music, call an Uber, or play games. If you have Internet-connected home devices you can turn on the lights with your arms full of groceries, or adjust the thermostat without lifting a finger. It’s incredibly handy.

The leading smart-home company Insteon... has dozens of devices such as lightbulbs and thermostats that can be controlled via Echo.

Owners of the August smart lock can lock a door using voice commands.

Other apps make it possible to order pizza from Domino's or pay your Capital One credit card bill.

In the business world, Alexa is literally getting a seat at the conference table. Customers of the business analytics company Sisense can ask it questions such as what total revenue was during the last quarter in Europe.

[Citrix] has built ways for customers to reserve conference rooms, and control their lights and equipment, by voice command. IT administrators can call out to Alexa to check the status of Citrix programs' health.

Yonomi, a smart-home company, has built software that connects multiple home devices so that they can all be controlled by a single Alexa voice command. After a little setup, I can say, "Alexa, turn on Netflix and Chill" to have my TV turn on, Netflix open on the screen, and my lights dim.⁶

It's pretty easy to see from above that a lot of these "skills" that Alexa provides enable you to avoid interacting with another person or to avoid a small physical task. Perhaps all these skills that Alexa gives to us provide a way of replacing our skills of patience, conversation, listening and reading body language. Alexa seems to be pushing us to think and act in short commands that it can process. While the promise of this type of speech recognition technology has been to make technology more responsive to our natural language, maybe what it is really doing is making us adapt to its needs. And that sounds like a familiar story when it comes to our relationship with technology.

In Aaron Paul Calvin's excellent article, 'Echo and the Lonely Men: Can Amazon's Alexa Be Your Friend?,' he delves into the history of Alexa's creation and how it is being adopted by users. As he notes, it's not really the hardware that Amazon is selling you – it is the service. And that service is the totality of the skills that Alexa can provide. "Alexa doesn't live inside the Echo's hardware, but rather, on Amazon's servers. The Echo is merely a conduit for Alexa."⁷ And as Calvin points out, there is a theme to all of Alexa's skills:

At [the Consumer Electronics Show (CES) 2017], Amazon was not, itself, present. Alexa, however, was found in cars, phones, robots and laundry machines. So far, based on the number of companies

rushing to integrate, this investment in Alexa only makes it more popular with consumers. The app economy might have peaked, but there's seemingly no limit to Alexa's skills. The recent spike in digital assistants — from Siri to Cortana to Alexa to Google Assistant — mirrors another theme prevalent throughout this past CES: human loneliness.⁸

Bringing this theme down from the cloud found at a self-congratulatory industry tradeshow and into the details of a commonplace human life, Calvin recounts his perusal of the product reviews found on Amazon's site for the Echo:

There are nearly 54,000 reviews of the Echo on Amazon. Most of them overwhelmingly positive, and most focus not on the device, but instead on Alexa. The current top-rated comment mentions how Alexa is not just the perfect companion but the "perfect spouse." When reached out for further elaboration on this comment, the commenter did not respond, but the core sentiment it suggests, that "If [he] knew relationships were this easy, [he] would have married thirty years ago, but now that I have Alexa, there's no need" was deemed "helpful" by over 46,000 people.

Finding in Alexa the perfect expression of servile companionship is something many Echo reviewers have in common — whether they're joking about it or not. "I talk to Alexa all the time, I broke up with my girlfriend and ever since I got Alexa I don't feel so lonely anymore," one user writes. "Don't even want to come out and hang out with my friends, I like it a lot!"

Alexa's servile feminine persona was a thoroughly researched subject and one that indeed "echoes" our current patriarchal technologically dependent civilization. Back in 2011, a study of synthesized voices at Indiana University found that both men and women find female voices to be "warmer." When questioned about how the voice of Alexa was crafted, a member of the Alexa development team was quoted as saying that they "tested several voices and found that this voice was preferred amongst customers."⁹

However, the appeal of Alexa's voice isn't just about finding males who desire a servile feminine figure in their life. The appeal is broad enough to include anybody who deals with solitude and loneliness. Calvin recounts both the feedback of a widower and a widow regarding how Alexa helped them through their losses:

"[Alexa] restored much comfort to my life and lifted the sadness and loneliness of being alone."

"My husband took his life about a year ago. I purchased an Echo and that Echo became company for me. I called her my new husband. I wish I could change it to a male voice."¹⁰

It's interesting to note that if you ask Alexa if it is depressed, it will answer, "I'm not depressed but I understand depression is a feeling humans experience. If you are depressed, try talking to a friend or a family member." But with the quantity and quality of friendships dwindling and family members being more often separated due to the demands of a technological society, where and how are we going to build those skills needed to endure living lives procured by a dependency upon technology?

Those new "skills" that Amazon's Prasad was urging us to develop



Amazon Echo: the all-seeing AI.

were not social or communal skills that we cultivated as a species over hundreds of thousands of years. He was referring to skills that you could sell back to the technological society in a trade to pay for your way through the system as it is, and has been, constructed. What we are really doing is de-skilling ourselves to the point where the only skills we can acquire are the ones we pay for, and in turn, get paid for. Through the education industry you go and into the machinery of civilization you are placed.

Using or being used by Alexa?

When children are introduced to Alexa, children do what they often do. They ask the same question over and over... and Alexa responds with the same answer over and over. While some parents have expressed concern over the lack of manners that these interactions produce (no “please,” no “thank you”), the more fundamental thing happening in these interactions is that children are not learning how to interact with real people.¹¹ By constantly commanding Alexa to answer question after question, the child is being taught the way to get information from someone is to badger them in a way that might be reminiscent of police interrogating a suspect. The title of a blog entry by Hunter Walk, a tech investor in San Francisco, gets the point across – “Amazon Echo is Magical. It’s Also Turning My Kid Into an Asshole.”¹² As we saw earlier with Microsoft’s chatbot AI, Tay, the AI can be manipulated by humans to regurgitate whatever humans feed it.¹³ By the same token, through interactions with Alexa, humans can be conditioned into a stunted version of conversation where the roles are limited to question and answer protocol.

And it’s not just speech interaction that Alexa is being confined to. There have been additions of a camera and a screen to provide different interactions between Alexa and its users. So, not only does Alexa listen, it can also watch and provide visual feedback as well. Some examples of what Alexa can record and process are discussed below.

In November 2015, Alexa may have made a sound recording of a murder in Bentonville, Arkansas. The Bentonville police had tried to obtain data from an Echo and other smart devices on the alleged murderer’s property where the victim’s body was found in a hot tub. Since the recordings are held in the cloud on Amazon’s servers, the police issued a warrant to retrieve any recording made by the alleged murderer’s Echo during the time when the murder may have occurred.

Amazon refused to share the recordings and as an article from RT described – “Alexa, voice of Amazon’s Echo, not only always ‘listens’ but also retains the right to remain silent.”¹⁴ This was a first for Alexa, but if Alexa can be used in the prosecution of crimes, it’s likely that law enforcement will find a way to access that data sooner or later. For instance, in August of 2017, MWR published a document outlining how early versions of the Amazon Echo were vulnerable to a physical attack that could result in the installation of malware at the operating system level. The malware could be used to turn the Echo into a “wiretap” that is “always on and listening” without leaving any physical trace of tampering.¹⁵

In a less morbid application, some of the first skills developed for the camera on the Echo (called the Echo Look) have been for fashion tips. The idea is to use the Echo Look as something like a “smart mirror.” One that is able to photograph you in your outfit, from many perspectives, and then feed it to the cloud for analysis. In this way, Amazon could collect data on fashion trends and the user could then use the “Style Check” feature to verify that their outfit matches a desired look or fashion statement.¹⁶ Mirror, mirror, on the wall... the march towards standardized fashion styles glides smoothly on the back of Amazon’s servers and Alexa’s all-knowing expertise.

Along with the Echo Look, there is the Echo Show, which is the Echo coupled with a screen for visual feedback. The main reason for adding the screen to the Echo is to display data visually that might be difficult to process by having Alexa speak it. For instance, a list of ingredients for a recipe, the week’s weather forecast, or step-by-step instructions to complete a task. The Echo Show also lets users watch video clips, monitor video streams from connected smart devices and Amazon is also looking into the ability to make video calls through the device as well.¹⁷

All of these abilities and “skills” that Amazon is building into its Echo product line are used to feed the AI of Alexa. While social media corporations might hide behind the claim that their services connect people to each other, Amazon has no such pretense. You are being connected to Amazon’s services and their competitive advantage is the Alexa AI giving you the feedback you desire. It’s not even the online mediation of likes, follows and comments from other humans that the user desires. This is feedback directly given by an AI that has directly observed humans. This is akin to posting a picture on Instagram or Facebook and then having Alexa provide you with the number of likes it calculates the picture would generate and then provide

the comments that would most likely be given. All this based on its direct interaction with humanity.

Head in the Clouds

Through embracing AI, we are embracing a sort of servitude to it. In this aspect, it could be instructive to see some parallels between AI, such as Alexa, and God. Both are disembodied, “in the cloud,” listening and speaking to us in various forms. They both exist to provide guidance and reassurance to our existence. Perhaps they are both imaginary friends to replace the ties that once existed between us. From the mediation of the shaman interpreting reality through communing with the spirits, to religious congregations interpreting reality through a communal relationship with their chosen gods, to an individual relationship with your chosen deity, and now to the Great AI in the Cloud there to do our fact-checking and manipulate our collective consciousness.

Dostoyevsky famously wrote in *The Brothers Karamazov*, “Everything is permitted,” as a way of describing the breakdown of traditional religious beliefs in his contemporary Russia. The belief in an all-knowing God was becoming difficult to maintain. Here we are, nearly 140 years after Dostoyevsky wrote those words, but perhaps a more fitting phrase for our times is, “Everything is recorded.” The belief in an all-knowing AI is becoming easier to accept.

These devices are here with us. Always listening, always processing. And what is it we are doing? Passively ingesting? Jumping from one technologically-induced stimulation to the next? These digital assistants are ever present because we never are. We have placed ourselves in a cloud of distractions that we can increasingly only navigate with digital assistance.

Endnotes

1 <https://www.voicebot.ai/2017/07/14/timeline-voice-assistants-short-history-voice-revolution/>

2 Ibid.

3 “On August 31, 2012, four Amazon engineers filed the fundamental patent for what ultimately became Alexa, an artificial intelligence system designed to engage with one of the world’s biggest and most tangled data sets: human speech. The engineers needed just 11 words and a simple diagram to describe how it would work. A male user in a quiet room says: “Please play ‘Let It Be,’ by the Beatles.” A small tabletop machine replies: “No problem, John,” and begins playing

the requested song.”

<https://www.technologyreview.com/s/608571/alexa-understand-me/>

4 <https://www.voicebot.ai/2017/07/14/timeline-voice-assistants-short-history-voice-revolution/>

5 <https://aitrends.com/ai-research/goal-of-alexa-design-was-hands-free-voice-activated-access-to-ai-in-the-cloud/>

6 <https://www.technologyreview.com/s/602125/developers-expand-amazon-alexa-skills-exposing-both-its-potential-and-its-limitations/>

7 <https://digg.com/2017/amazon-alexa-is-not-your-friend>

8 Ibid.

9 Ibid.

10 Ibid.

11 <https://www.technologyreview.com/s/603708/what-happens-when-robots-become-role-models/>

12 <https://hunterwalk.com/2016/04/06/amazon-echo-is-magical-its-also-turning-my-kid-into-an-asshole/>

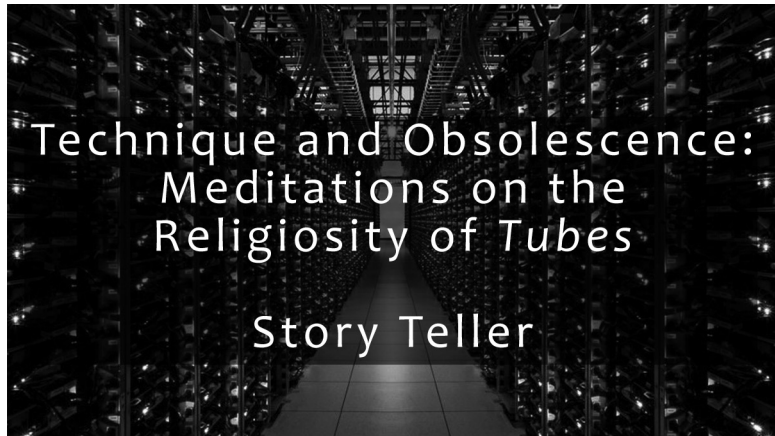
13 See ‘Zero Chill’ in *Black and Green Review* no 2.

14 <https://www.rt.com/usa/372090-amazon-refuses-echo-warrant-arkansas-police/>

15 <https://labs.mwrinfosecurity.com/blog/alexa-are-you-listening>

16 <https://www.technologyreview.com/s/604284/amazons-echo-look-rates-your-outfits-and-slurps-up-revealing-data/>

17 <https://www.technologyreview.com/s/607832/amazons-touchscreen-smart-speaker-solves-a-big-problem-with-ai-assistants/>



The immortal worm's story ends when it is swallowed by another immortal. The story of the swallowings is the subject of World His-story, which by its very name already prefigures a single Leviathan which holds all Earth in its entrails.

-Fredy Perlman, Against His-story, Against Leviathan¹

They want to deliver vast amounts of information over the internet.

And again, the internet is not something you just dump something on. It's not a truck. It's a series of tubes. And if you don't understand those tubes can be filled and if they are filled, when you put your message in, it gets in line and it's going to be delayed by anyone that puts into that tube enormous amounts of material, enormous amounts of material.

Now we have a separate Department of Defense internet, did you know that? Do you know why? Because they have to have theirs delivered immediately. They can't afford getting delayed by other people...

—Ted Stevens, U.S. Senator²

Andrew Blum begins the preface of his best-selling book *Tubes: A Journey to the Center of the Internet* (2012) when a Brooklyn squirrel kills his internet connection by chewing through a rubber wire.³ Its death stirs the author to investigate the internet's physical structure over a course of two years, traveling the tens of thousands of miles of buried cables that link continents, buildings, and people together in a history of names and landmarks that define the complex technology. A primary evolutionary force today, the internet is now thoroughly integrated into the earth, its tubes converging to form the infrastructure necessary for it to function. The book spans genres to map this ground: travel narrative, digital ethnography, adventure novel, dystopian nonfiction, virtual theogony, Blum provides in *Tubes* an account to order the chaos of unseen forces, ideological values, and cultural norms of an increasingly high-tech landscape.

On the Sorcery and Tyranny of the Technosphere

The squirrel jolts both author and reader out of a world of failing metaphor, making the technical anatomy of the internet tangible by illuminating its machinery:

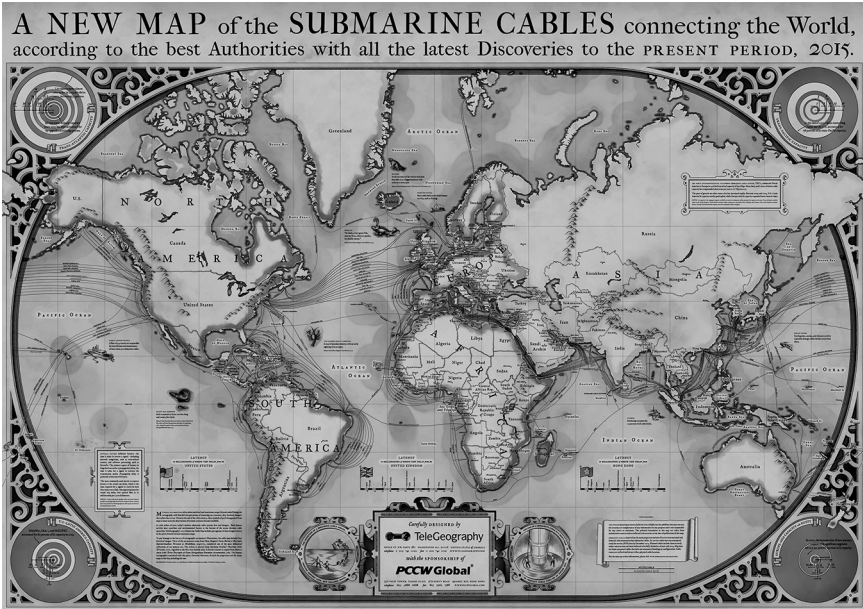
In basest terms, the Internet is made of pulses of light. Those pulses might seem miraculous, but they're not magic. They are produced by powerful lasers contained in steel boxes housed (predominantly) in unmarked buildings. The lasers exist. The boxes exist. The buildings exist. The Internet exists—it has a physical reality, an essential infrastructure, a 'hard bottom,' as Henry David Thoreau said of Walden Pond.⁴

The omniscient nature of the internet means its points of presence are everywhere, streaming human activity across glass fibers between them.⁵ For Blum, it is initially recognized to reside in the “black cable modem with five green lights, a blue telephone adapter...and a white wireless router with a single illuminated eye” beside his living room couch.⁶ From there, the line moves into the basement, through the yard past the squirrel to a fiber junction box, where a thick bundle of cables aggregates the surrounding neighborhood into “strands of glass...node8M48,” in North Brooklyn, moving to a “head-end,” a fenced off building containing a cable modem termination system whose router, “sprouting yellow wires,” is plugged into a “master head-end” in Hicksville, Long Island, where the broadband internet services center’s (BISC) routers “aggregate all the signals coming and going between Cablevision’s customers and the rest of the Internet” – networks like Level 3, AT&T, Hurricane Electric, and KPN that connect in specific places: “60 Hudson Street, 111 Eighth Avenue, Equinix Ashburn, Equinix Newark, Equinix Chicago, and Equinix Los Angeles.”⁷

Unlike the usual metaphors used to describe the internet—“web,” “cloud,” “net,” “village”—*Tubes* aptly represents the otherwise undetectable links that are crucial for civilization’s many networks to operate. The technosphere, veiled in a technical language so often left to specialists, deforms a sense of reality by clouding the ability to distinguish between self, internet, and ideas of either, enclosing and uprooting its users into a placeless existence eclipsing the real world.⁸ By focusing attention on its material structures however, Blum works to demystify, decipher, and dissolve the illusions that disappear the real story.

In doing so, Blum’s journey takes on for him the significance of a religious pilgrimage, searching out the face of the internet’s hidden structures and the gurus that guide him as he navigates the terrain. Along the way, a kind of mystical strain runs throughout the author’s account, transcending the visible world to discern the controlling powers beyond it, one testifying to a technology that faithfully intends and records a modern economic. In this regard, technicians and computer scientists are described as the virtual engineers of an occult science, structuring an asylum increasingly regulated by machines, algorithms, and technicians. As one product philosopher and technology ethicist describes, “never before in history have 50 mostly male 20-35 year old designers living in California working at three tech companies influenced how a billion people spend their time.”⁹

Readers might then recognize in Blum's pages the details of their own subjugation, animals captured and constricted by the fiber and tubes that ensnare them in a pantheon of ruling forces.



Stratigraphic Layers of a New Religious Empire

Blum analyzes the light within the tubes as a cultural artifact shaped by social structures and terrestrial backdrops, “nexuses of information” whose logical, physical, and topographical conditions together form the layers of a modern domestication. The internet can therefore be described as a set of overlapping realms; electronic signals travel the physical machinery across earthly terrains in this newest imperial project:

Multiple networks run through the same wires, even though they are owned and operated by independent organizations...the networks carry networks. One company might own the actual fiber-optic cables, while another operates the light signals pulsing over that fiber, and a third owns (or more likely rents) the bandwidth encoded in that light...that allows for the likelihood that many individual networks— ‘autonomous systems,’ in Internet parlance—run over the same wires, their information-laden electrons or photons jostling

*across the countryside, like packs of eighteen-wheelers on the highway.*¹⁰

Not unlike archaic civilizations governed by the warrior-priest-kings that proclaimed themselves divinities worthy of worship, the culture today is similarly guided by a uniform conviction. Digital code and the security of its delivery apparatuses are today invested with the same triple authority (military, religious, political) that these techno-priests wield as they are tasked with regulating daily life and organizing behavior that governs technical, cultural, and ecological realities. A seamless, omnipresent progression, discernable patterns and rituals become apparent within the internet's hulking mass, cemented in the daily services and communion its attendants devote their lives to.

Like every religious history before it, there are moments and places where powerful ideas take material shape, their psychic and aesthetic components arranging narrower and ever more impoverished experiences for their users over time. Blum traces the internet's origins as the conception of the survivability of information through an experimental nationwide computer network, before drifting to the aged relics, major centers, and internet onramps that make up its storied past. He visits the cable landing stations, the trucks and ships that lay cable beneath cities and oceans, and data factories to gain insight into the servers, routers, modems, exchanges, and all the rest of the instruments, plastic, metals, fiber optics, boxes, discerning from these remains the social order contained in each pulse of light. The handful of global megahubs that represent hundreds more regional hubs, each capture and redistribute traffic along the paths where industrial and colonial dynamics have only advanced in sophistication, are ruled now by the single, golden law that repeats the digital kingdom's prophetic destiny: "Get your packets to their destination as directly and cheaply as possible, by increasing the number of possible paths."¹¹

An architecture and narrative of control has thus been set up, circling the earth, plugging continents in through telegraph cables, ocean lines, port cities, converting countries into call centers, expanding with the ferocity of evangelists espousing manifest destiny. The consequences include what Blum calls "cities of light," whose fiber strands converge in access points and critical vectors that move and store electrified data. Deep inside this complex, our digital avatars are imprisoned, enslaved to those who sell online produce to bidders seeking information on prospective customers. The entirety of our

social order is present in the inner workings of these tubes, stratigraphically signaling the geologic boundary of a new reigning creature that has drastically altered the flow of energy with a synchronizing technique, yoking and repurposing our cultural memory:

*This is the cloud. All of those buildings like this around the planet create the cloud. The cloud is a building. It works like a factory. Bits come in, they get massaged and put together in the right way, then packaged up and sent out. But everybody you see on this site has one job, that's to keep these servers right here alive at all times.*¹²

The reality is mundane, banal, ordinary: the psychic aspect of land is traumatized by civilization, empire, capital, and technology's imperial ambitions, a lineage producing new behaviors to cope with the artifice of screens, "clouds," gadgets, and instruments that redesign our experience of and relationship to the world.¹³

A Mathematics of Light

Blum journeys across the anatomy of this newest Leviathan to search out its "aura," each physical connection presenting another organ of efficiency where light speed connection is valued above all else. Cheap, fast, and reliable capacity is purchased, traffic and congestion grows, new tubes connect formerly separated nodes, and profitable companies accelerate the rate of networked exchange. He describes his revelation, that the internet should be conceived of not as a noun but a verb, an "internetting" of global culture approaching light speed:

*What I saw was not the essence of the Internet but its quintessence – not the tubes, but the light...better thought of as math made manifest; not hard, physical tubes, but ineffable, ethereal numbers...for all the constantly advancing miracles of silicon, the planet itself remains unassailable, along with the speed of light and the human desire to be connected...the Internet was made of light.*¹⁴

Blum does not include much in the way of the energy it takes to force light-speed travel across enormous distances when volts of electricity are sent through cables, nor does he speak much to the ecological effects of laying tubing, the wastelands of trashed computers and discarded devices, nor the changes in surrounding life places, imagined

spaces, and domesticated dreams such technological “progress” induces in the human mind.¹⁵ He does not talk about the transformation of earth into the tubes themselves, nor the rate of emissions arising from this process, nor the energy it takes to sustain it.

Instead, the internet’s essential places and the moods they engender are described, along with the altogether overwhelming nature and degree of its complexity as a whole, aspirations of near-frictionless profit provoking crises of bandwidth in which states and firms are sacrificed in pursuit of a higher purpose. Blum translates his revelation:

It worked according to an incontrovertible physical truth: a pulse of light goes in one end and comes out the other. There is plenty of magic in the light itself—the rhythm and wavelength of its pulses determine the amount of data that can be transmitted at a time, which is in turn dependent on the machines installed on each end. But none of that changes the need for a continuous path. Individual strands of fiber can be spliced together end to end by melting the tops, like candles—but that process is delicate and time-consuming. The path of least resistance is unbroken. Hopefully.¹⁶

Targets for Terrorists

As energy bubbles up from the earth to be extracted and processed into fuel for the technologies we increasingly devote our lives to, what relevance do IT workers, hackers, security experts, electricians now have for the companies and states they minister to, shepherding and securing their hobbled flocks unendingly afraid of the looming specter of computer death? Perhaps in recognizing their destinies are impacted by powers greater than themselves, it is only natural to attempt to evoke favor from the apparent supernatural forces they are dominated by, paying technicians to channel this divine power to heal any machine afflicted with a virus.

Like each religion before it, the internet situates a glorified memplex, culturally accreting sacred sites, relics, monuments, apostles, stories, and ritual services. One of Blum’s interviewees forecasts the places to be attacked and defended, celebrated and hidden in what he anticipates as the battle space for an oncoming spiritual feud:

Are we creating through this book a road map for terrorists? By identifying the ‘monuments,’ as you refer to them, if they are known

*and damaged and destroyed, it's not just one building that goes down, it's the entire country that goes down, and is that a wise thing to be broadcasting to the world...Do you want to be the guy who says, 'here's what you attack to take down the country'?*¹⁷

Already a Scotland Yard 2007 operation broke up an Al-Qaeda plot to blow up the Telehouse compound and with it do extensive damage to the London Internet Exchange-- what Telehouse technical services director called "strategically important organizations at the heart of the internet," in an interview with the Times of London.¹⁸ The threat of sharing information about critical infrastructure built for the purpose of sharing that same information is apparently not too great, and ultimately Blum's interviewee shares his knowledge for one simple reason: "they wanted the attention; it would be good for business."¹⁹

The perennial contradiction between profit and safety resurfaces: while secrecy may from a security standpoint make sense, from an economic perspective it does not, so any group will broadcast into the marketplace for the sake of this intention. The decentralized design of the internet is similarly juxtaposed against the tendency to concentrate hubs to reduce the time it takes to send and communicate content as it moves along the tubing to increase profitability. These principles of publicity and secrecy, distribution and concentration form the basis of the dual nature of the internetting world, evident in a contradictory aesthetic of "cyberiffic" tones of Silicon Valley's building interiors, compared to the often discreet and anonymous steel buildings at undisclosed addresses owned by indeterminate companies.²⁰

Whether any of these targets remain essentially symbolic or functional in primal or ecological warfare is a question to be taken up when considering the underlying strategy and tactical advantage behind any potential action. It may be easy enough to kill off a portion of the North American Network Operators Group ("NANOGers"), so-called "wizards behind the internet's curtains" (who Blum writes are the only ones who would know how to fix the internet's biggest pipes) at a party for instance-- "if a bomb went off in its midst, who would be left to run the Internet?"; or somehow bypass the sophisticated security systems to infiltrate an exchange; or strap a bomb to a Brocade MLX 32 router at the core of some large internet exchange at Frankfurt, Amsterdam, Palo Alto, or London to prevent hundreds of gigabits (billions of bits of information made of light) from being sent each second.²¹ The obvious vulnerability is recognized as one employ-

ee at the “center of Milwaukee’s internet” muses to Blum on the mass of tubes serving twenty five thousand people before them: “look what someone could do in here with a chainsaw.”²²

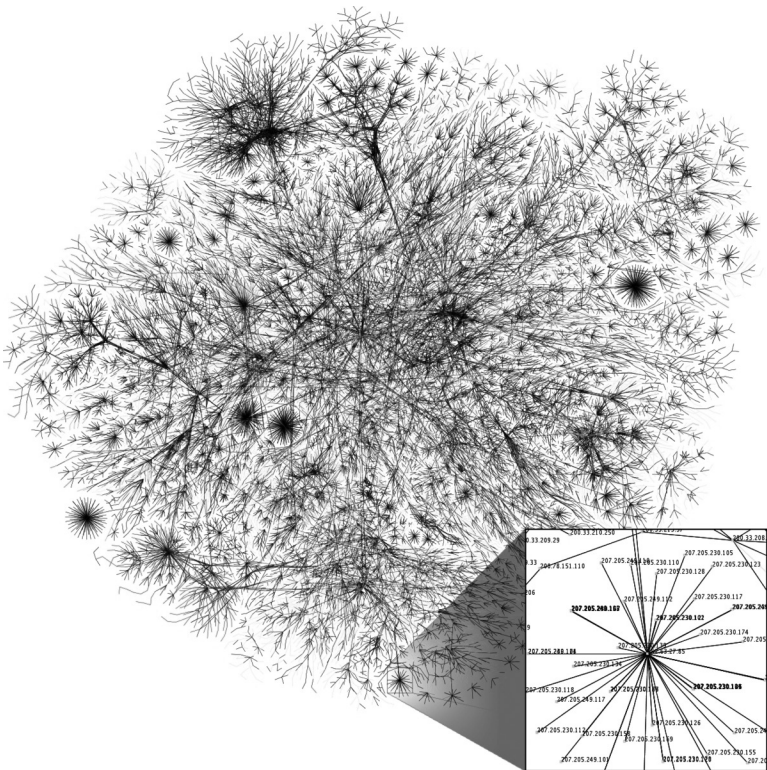
If the Internet is generally a series of tubes connecting machines, then it exists as a series of routes that can be cut and nodes that can be crippled. Resistance, the increased friction on a flow to hinder and discourage its movement, is antithetical to the previously mentioned golden rule of the internetting impetus of light-speed profit. One might seek to launch a tube-slicing or box-breaking spree—the larger, more connected, and most indispensable the bulk of conduits, the better, the most heavily trafficked international Internet route for instance, between New York and London.²³ One article points out “roughly 99 percent of global Web traffic is dependent on deep-sea networks of fiber-optic cables that blanket the ocean floor like a nervous system...tangible targets – creating very real choke points in the system.”²⁴ Beyond that, destroying the thirteen root servers that decode IP addresses, stopping their replication, and killing backups would prevent all internet browsing while taking down phones, computers, businesses, etc.; governments or hackers could use their internet kill switches to shut it off and keep it down; data centers could be demolished; key engineers, architects, and others capable of rebuilding core internet components could be attacked; cyberwarfare operations or ransomware could be employed, and on and on...Looking at the technopriest class as similarly vital, their annihilation might have a comparable effect. Without wizards behind the curtain, who will sustain the spectacle?

To what degree would such attempts be effective? Would destroying servers and routers, slicing network paths, or eliminating super-empowered actors seriously delay messages by rerouting them through alternative pathways? To what extent would physical damage slow a connection, or halt it completely? And to what purpose? To delay the messaging by a fraction until tubes are repaired, the boxes replaced? To hinder and disrupt the ease and facility of “resource” extraction so long as one is able? To free oneself of the internet altogether? And always, for how long?

Never forever. Any significant action causing internet failure has arguably remained minimal and always temporary due to the basic premise of the internet’s original design. Power may go out and regional access may not work, but the internetting remains. Major hubs and exchanges have fail-safes and backups, so that it is, for all practical purposes, “self-healing.”²⁵ Whether cables are cut by earthquakes

or fishing boats cast anchors unaware, or a buried fiber-optic cable is accidentally cut with a shovel, knocking Armenia offline for twelve hours, repairs are relatively instantaneous.²⁶ Put otherwise, while the internet's extremities may be vulnerable and fragile on an individual basis, the overarching structure of the whole is much more resilient. More likely than anti-tech activists crippling communication infrastructure may be a country or company forgetting to pay, as when the entire Australian continent was shut off from internet services after the Australia Internet Exchange forgot to pay its bill.²⁷ Here, the intention and directives guiding those whose hands are on the machinery is evident as a crucial motivating force.

Attacking the internet's physical structures would likely result in delays of hours, perhaps a day or two. For anything approaching weeks, or theoretically months or years, chaos would seemingly have to be introduced through a highly developed code or the equivalent degree of physical destruction of critical infrastructure on such a scale that its replacement could not occur in any timely manner—capabilities



A partial map of the internet.

largely out of reach of most would-be anti-civ activists, and certainly disincentivized by increasing scales of state and industry sponsored retaliation. In all these cases, recovery points, security measures, and the decentralized nature of internetting in general would likely mean the global energy systems that empower the internetting in the first place would make better targets than the internet itself.

As pointed out, the only hacker-caused blackout to date was launched against Ukraine, presumably by Russian actors, lasting as long as it took to restore power manually.²⁸ Since the event, Ukraine has been recognized as the unofficial training ground for Russian cyberwarfare operations, presumably in preparation for future real-world missions against perceived threats.²⁹ Any serious large-scale cyberattack, therefore, seems more likely to be done by national governments targeting one another for geopolitical strategic gain than any non-state actor, though it is well known to be the case that governments kill their own internet, as with Iran or Egypt during the Arab Spring, and even the San Francisco Bay Area Rapid Transit cut communication services to disrupt coordinated protests.³⁰

For now, we can be confident that the internetting-of-things that occurred in the five years since Blum's book came out has subsequently recruited and weaponized the technosphere's mass of connected devices to make them and the tubes between them a viable and persistent threat to anyone remaining dependent upon them, as individuals and institutions paralyzed by ransomware, like the critical financial and energy systems digitally assaulted in cyberspace every day, have all found themselves to have become targets in a new game playing out across tubes that take shape in the images and stories that flicker across screens.³¹

Obsolete Techniques

Might some successful attack, if only for a moment, serve as a breath of fresh air, a temporary break in the monotony of second life, shocking people back towards the non-digitized world? So long as the basic narrative of technological progress and profit remains intact, attacking individual tubes of electricity or the boxes they inspire will likely not in any way be a major setback for civilization if taken as an exclusive method of activity or resistance. The internet, as a technology, exists as the hyper-specialized body of techniques developed to share information, now largely for commercial purposes, out of which entire industries have been erected. Within the context of civilization

and capitalism, it is a medium that motivates countless numbers to stake the entirety of their lives upon the machinery of their own domestication.

Resisting this technology is, then, very nearly impossible in any meaningful way. If one wanted to, one could go behind their couch and smash their modem and phone with a hammer. Easier, unplug them. Disconnecting others however will likely remain temporary and therefore generally ineffectual in any permanent sense. Instead, the tubes and boxes would need to be deprived of electricity *at the very source* of the physical energy they depend upon while simultaneously deprived of the psychic energy it takes to reproduce the narrative that such modern techniques are essential to live. Resisting technology in any relevant way beyond mere symbolic victories will not occur through physical and electronic attacks on infrastructure alone, as they are only effective so long as methods of rewilding are not neglected.

Online connection and disconnection offer weapons for both assault and defense. As Blum writes, “to be on the Internet is to want to be found.”³² The social aspect that internetting implies (as distinct from the energy infrastructure it relies upon) is thus both a vulnerability and asset. There is ostensibly no way to physically attack this edifice in any lasting way (or at the very least, it has never been achieved apart from webpages suffering from temporary DDoS attacks or brief moments where regional connections are severed), assuming taking down the entire internet, or the larger technological systems it exists within across the planet, is even the goal at hand. The benefits of any lone attack to the anti-tech activist is negligible at best because the force of resistance in such examples is simply too weak or unavailable to be maintained in the face of a self-repairing Leviathan.

Further, for the same reason insurgents don’t start by breaking their own modems, smashing their own routers, and cutting their own telephone wires in order to avoid repression, activists would further be “disadvantaged” in the war they wage if they were to attack the same regional information communication technologies they depend on for reconnaissance, securing necessary supplies, organizing, etc. In a civilized context of economic competition and state power, try as one might, attacking critical infrastructure does not make it go away, because the *perceived need* for it does not go away; instead, technology’s *raison d’être* is reinforced, evolving more effectual security measures to defend against alleged threats, developing new security protocols, etc.

This is the realization Blum's demystification of abstraction provides: the internet represents our own collective desire and so as long as it is wanted, it remains. He explains, "everything you do online travels through a tube. Inside those tubes (by and large) are glass fibers. Inside those fibers are light. Encoded in that light is, increasingly, *us*."³³ To attack this digital "*us*" without attacking the civilized context that produces and sustains "*us*" amounts to a kind of symbolic, nonstrategic martyrdom and indiscriminate attack that serves only Leviathan's reified narrative that it is essential to protect the civilized from what can only be interpreted as an incoherent doctrinal cancer.

Any movement against civilization, individual or otherwise, recognizing the futility of physical attacks against infrastructure alone might shift to human intention as the location where the battle for primal anarchy might be waged. Attacking the grid's physical apparatus *without* undomesticating from the same structures one might seek to attack would be an unreasonable, impotent, time-consuming activity that misunderstands the scale necessary to be effective.³⁴ If technological progress means improved "efficiency" in actualizing a given potential or end, then the internet, its infrastructure, and the technosphere itself, along with civilization or domestication as a whole, are amassed bodies of techniques that have at times been understood to be obsolete as survival methods. But symbolically attacking largely irrelevant or easily repairable cables and tubes that remain nonessential to the overall structure of the internet and civilization will remain largely ineffective unless enough energy is invested into non-technological lifeways, depriving the technosphere of the effort and intention it takes to remain operational and relevant in the first place. Where intention goes, energy flows. Or as Blum writes, "people go to where things are."³⁵

Electrification, perhaps the ultimate expression of domesticated energy, grounds the internet's pulsating light, re-presenting Leviathan's collective will in each new click, like, tweet, post, and communicated message or transaction. To live a life where such technologies are unnecessary and obsolete, it is vital to develop survival techniques where technological disconnection—a life without these specialized techniques and apart from what is internetted—is not a disadvantage, but cultivated as an unmediated pathway to access the universal energy coursing through the earth, now used to power machines. On its own, this reconnection is able to entirely resist technology, alienation, and the division of specialized labor that reproduces the ultra-domesticated existence separating us from what our aboriginal bodies long

for.

But how does a life without electricity endure? Whereas anarchists could arguably be happy with the ability to wrest power away from state and corporate power using decentralized media, the technosphere it depends on has become omnipresent, omnipotent, increasingly omniscient in its own right. Learning to live outside electricity and domestication to adequately resist the electrification of life remains a necessary ingredient, more so than blogging about attacks on power stations can ever be.

What then is the place for breaking boxes and cutting tubes in the war for anarchy and the wild? The artifacts that facilitate such relations can be attacked insofar as civilized networks can be leveraged against themselves, victims of the same national and technological power they promote. Inevitably, whether state or non-state actors take down grids across the world or their citizens simply learn to live without them, letting them crumble without resurrecting them when they do, they will eventually cease to function one way or another if wildness is ever to recover. Like any specialist faced with a disrupting technology, the technopriests advocating subservience to the electric gods they serve, charging fees and collecting tariffs, can do nothing once others have realized these gods themselves are dead and dying, their religion decaying as the biosphere's energy flows are uncaged to flow freely again, repairing themselves and the landscapes as the fountain of energy bubbles up into healthy communities once more. But if the direct connection to the surrounding land necessary for a life apart from Leviathan is forsaken, will it matter? Such structures might remain only scapegoats to condemn while denying the unmediated experience of wild nature.

On some level, this necessitates a kind of appraisal, detailing and examining the processes of civilized life each of us are subject to. Is it possible to live without a phone, internet, or electricity today? Where and how? What local networks can aid us towards these ends? How can life exist without civilization, in perpetuity? Is life so domesticated that one cannot survive without the imprisoning asylum around? How can this reality be undone, as fast as possible, totally and completely? If not, why not? If it requires internet, electricity, or civilized structures to facilitate the experience of true liberation and a life attuned to a wild and uncontrolled existence, then how to distinguish between technological necessity, desire, and addiction? At what point will these structures become outmoded towards such ends and how to move beyond even them?

Blum continuously asks what the purpose of internet connection is, or any connection, at all? Such questions provide opportunity for the complete reformulation of a mathematics of light: what does your body need at its deepest levels? What foods satisfy those needs, and how can these foods be freely sought and attained? Where then should one live or move to directly access the energy necessary for life in each passing season? What is worth giving attention to and reproducing in each new present? A web site? A Facebook group? A pithy tweet? A coping mechanism? The company tasked with repairing damaged tubes? The sentiment behind the messages delivered through these tubes? What online activity is absolutely essential, and what remains only the residue of domesticated habituation? Answering questions like these—how to live life unmediated by tubes of controlled energy—we approach the guiding attitude driving the technosphere onward and can consider how to dismantle technoculture and make the internet obsolete at a personal level. Such answers begin to establish the lifeways necessary for uncivilized life to take root.

Dispossessed of nearly every landbase by civilization, anyone might be forgiven for embracing the hyper specialized techniques made indispensable to survive each new day. Still, one might perceive a specter of mass refusal taking shape, where a permanent unplugging from infrastructure at increasing scales could begin to return life to the instincts of its deepest nature. To continue civilized pathways would be to accept a place as hyper domesticated animals, helplessly reliant upon schemes designed to augment subservience, where any “resistance” would remain superficial and ineffective so long as the depth of an instinctual nature remains unexplored.

Retrieving a Depth-of-Place

The question of civilization and resistance, as will be argued in this last analysis, remains a technical question: how do we survive together, here, based on what is available to us, now (and forever)? We can today recognize that civilization no longer (if ever) provides an answer. Rather, other techniques are needed to render civilization obsolete as a force of social organization and adaptation to new conditions.

While it is often assumed civilization cannot or will not voluntarily transform itself into a sustainable mode of operation, to believe a planetary eco-militia front will force civilization to its knees can seem even more far-fetched than voluntary transformation (though admittedly, any scenario in which humans survive an upcoming bot-

tleneck is too). To run from it, or fight against it, as Perlman points out, is to invite obliteration of those communities of resistance that try either:

the community can remove itself physically from the monster's reach, or it can stay where it is and try to hold its own against the beast...ultimately none flee for good, since the Leviathan will shrink the size of the world and turn all places of refuge into cleared fields... [its] institutions are not a part of Life but a part of Death. And Death cannot die.³⁶

Any hope for a future may likely depend upon the degree to which transformation is voluntary and the only conceivable way to stabilize and sustain a "post-wild" world, forced into interdependence by the body of domesticating techniques it co-evolved with in symbiosis.³⁷

In the wake of social collapse, there can be no assumption that the simple vacuum of civility would be preferable to intentional transition. Rather, the abrupt collapse and absence of structure tends to leave millions vulnerable and unable to withstand the murderous technology of the genocidal state.³⁸ It is also difficult to believe civilization would go down without taking everything with it. Here, uncivil imaginings are valuable in re-ecologizing the suffocating traumas of cityscapes. In this critical space, informal bioregional networks, permanent subsistence zones, and feral bands of human animals intimate glimpses of approaches where landscapes are not continually assaulted by extractive industry, but offer places where healthy cultural patterns have a chance to reemerge to establish roots.³⁹

To unplug from the machine for the sake of subsistence may still involve domesticated techniques, but can begin the process of unlearning the totality of oppressive techniques. From here, assaults against any civilized remnant can be launched, providing non-electrified networks of anonymous activists the places, groundwork, and support needed to attack the legitimacy of the state, omnipotence of industry, and reified economic doctrine from the refuge of rewilded land and lives. To imagine these forces breaking down in the face of an exponentially growing wild instinct one has only to remember: anything can happen.

It is elsewhere envisaged that religions evolved from the symbolic rituals associated with significant moments in life: birth, subsistence patterns, death.⁴⁰ Burials, ceremonies, rituals, hunting magic,

art, power structures, seasonal calendars all aligned to what was perceived as a sacred order stemming from wild nature's divine essence. Whereas this life-giving energy directly patterned ancestral cultural expressions, rooting them in what might be called animistic "religious" experience, today that same energy flows through lines that power the machines that surveille us. That energy has now been so distorted as to have fashioned a cybernetic religion, one that would sacrifice living experience for an existence mediated by a class who enrich and uphold themselves in a division-of-specialization, clicking life away with religious fervency. To confront this new techno-religious empire, better techniques for collapsing the edifice to retrieve the experience of wild nature must be encouraged.

The collapse of complex adaptive systems necessarily occurs when a system is deprived of energy.⁴¹ Knocking out the energy systems that maintain and power Leviathan's processes can increase the stress and, potentially, ensure that the plastic geologic layer of the Anthropocene—the tubes within which the entire civilized culture is now confined—may be so deprived of energy as to lay buried for millennia, obsolete and unused, marking the point at which humanity no longer desired to remain in its civilized state. Following Blum's lessons however, while the technosphere's physical veins that energize this system can be momentarily slashed, the apparatus itself will not bleed out for as long as there are those seeking to sew shut its wounds for the sake of convenience, security, and control, upholding civilization as the only conceivable technique to mediate power and secure privilege at the behest of its constituents. Yet it also seems the only way the community of life, human and non-human, together will survive.

To ensure biospheric stability (and any hope for a present in the future), only a rewilded, free arrangement is able to transcend paradigms of commodification and profiteering to achieve what at this point would be indistinguishable from a miracle. At the very least, one might experience life, however briefly, without external control, unconstrained in the devotion to wild instinct, freed of civilization, unmediated by the electronic signals that displace our deepest natures.

Endnotes

1 Perlman, Fredy (1983) pg. 43, in *Against His-story, Against Leviathan: an essay*. Black and Red, Detroit, MI

2 Stevens, Ted (2006) "Your Own Personal Internet" Wired. Taken from https://www.wired.com/2006/06/your_own_person/ Accessed 4/8/2017

3 Blum, Andrew (2012) *Tubes: A Journey to the Center of the Internet*. HarperCollins Publishers: New York, NY.

4 Ibid, 4

5 Omnicentricity is a term found in new cosmological literature, for instance in Brian Swimme and Thomas Berry's *The Universe Story*, representing an idea elaborated upon in Joel Primack and Nancy Ellen Abrams' *The View from the Center of the Universe*, speaking to the idea that every place in the universe is the center of an ever-expanding universe. Swimme writes: "the central archetypal pattern for understanding the universe's birth and development is omnicentricity...a developing reality that, from the beginning, is centered upon itself at each place of its existence." Consider those wisdom traditions speaking similarly, as with Black Elk in *The Sacred Pipe: Black Elk's Account of the Seven Rites of the Oglala Sioux*:

The first peace, which is the most important, is that which comes within the souls of people when they realize their relationship, their oneness, with the universe and all its powers, and when they realize that at the center of the universe dwells Wakan-Tank, and that this center is really everywhere, it is within each of us.

This archetypal pattern is one the internet follows as well, where each node (user) is an iterating principle central to the whole so that, as Blum will suggest, it is human intention and the desire to connect that is ultimately responsible for turning the originating activity of the universe into digital content and other concretized forms.

6 Ibid, 1

7 Ibid, 265-266

8 For the study on the Anthropocene, see: https://www.researchgate.net/publication/292964087_The_Anthropocene_A_conspicuous_stratigraphical_signal_of_anthropogenic_changes_in_production_and_consumption_across_the_biosphere In it, the anthropocene is described in terms of a "conspicuous stratigraphical signal of anthropogenic changes in production and consumption across the biosphere," and thus the mass of total human technology, now weighing 30 trillion tons, with more technofossil "species" than biotic species, potentially signals its geologic layer. Following science-fiction writer Arthur C. Clark's third law, "any sufficiently developed technology is indistinguishable from magic," the core of the technosphere, far from being a force separate from humans, can be located in the matrix of relationships that create cultural and individual identities of deepest value and meaning. This implies a deeply integrated existence wherein human activity, thought, the natural world, and unseen reality are all interrelated, exuding a magic-like power so long as the intricacies behind the technosphere's operating systems remain inaccessible. Blum's writing then contributes to an anthropological understanding of this phenomenon of magic, in the tradition of Weber, Frazer, Mauss, Malinowski, and Evans-Pritchard, or reimaged by voices like Starhawk, David Abram, Malidoma Some, and others. Blum's case differs however in the sense it is he who effectively becomes the "primitive" coming to terms with the more sophisticated techniques he works to get a handle on, an outsider charting the material patterns conditioned upon a potent witchcraft assumed to underlie the basic state of reality.

9 PBS. "Your phone is trying to control your life," retrieved at <https://www.you->

tube.com/watch?v=MacJ4p0vITM

10 Blum, 19

11 Ibid, 109

12 Ibid, 259

13 Domesticated animals, much less stimulated than their wild counterparts, will often evolve stereotypes (of 35 million farm, lab, and zoo animals and pets in the world, estimates are 91.5% of pigs, 82.6% of poultry, 80% of American minks living on fur farms, 50% of lab mice, 18.4% of horses have some stereotypy), defined as repetitive, invariant, and seemingly pointless behaviors hypothesized to exist when a biological need cannot be expressed, for example when captured gophers dig holes to feel safe, or captured carnivores pace intensely for hours on end. The persistent repetition of these “senseless habits” as an increasing percentage may mean the animal is suffering in a barren environment, so that abnormal repetitive behaviors help protect emotional responses through coping mechanisms. In this regard, do addiction behavior sequences evoked by modern electrical stimulation similarly provide coping mechanisms to deal to the horrible stress of having been removed by hyper civilized life from the rich, natural environments of early ancestors, interfering with an animal’s nervous system and quality of life? While the question of humans is not a focus, Temple Grandin suggests in her book, *Animals Make Us Human: Creating the Best Life for Animals*, that a well-designed animal welfare program would stimulate seeking (searching, investigating, and making sense of the environment) and play systems that produce feelings of joy in the core emotional systems in the brain, avoiding rage, fear, and panic systems when able. In contrast, wild areas that keep animals occupied and activate positive emotions are optimum environments to prevent these stereotypes from forming at all or reducing them when they do. For an overview of Grandin’s book, see <http://grandin.com/inc/animals.make.us.human.ch1.html>

14 Blum, 163

15 Studies on the ecological impacts of the internet infrastructure, for instance a Greenpeace report on internet data centers, show how the videos, pictures, emails, status updates, news, and tweets generated are stored in giant data centers packed with computer servers that consume huge amounts of electricity, often from polluting dirty energy sources and clustered in locations offering tax incentives and cheap costs. These electronic information factories amount to 1.5-2% of global energy demand (3% in the U.S.), growing at 12% per year; the data centers and telecommunications network behind the internet and cloud are ranked 5th against countries for electricity usage, emitting hundreds of millions of tons of CO₂ each year, or 1% of all emissions released from fossil fuels. A report on the impacts of submarine cables on environments conclude that electromagnetic fields and heat dissipation pose a threat to the marine environment, along with toxic contamination and disturbances. Whether the Internet of Things will be a net benefit for the environment is thus by no means clear, requiring one weigh the use of fossil fuels, automated work, and electrical efficiency against landfills of e-waste, with the United Nations University estimating 53 million tons of e-waste being disposed of worldwide while around 67 million tons of new electrical and electronic equipment were put on the market, predicting a rise by a third to 65.4 million tons by 2017. Further, while these environmentally destructive activities

are certainly capable of disrupting ecological services, the damage to our minds may be just as significant, albeit in new ways not yet understood. On internet addiction as a disorder, see <https://www.scientificamerican.com/article/does-addictive-internet-use-restructure-brain/>

For reports or studies mentioned above, see: <http://www.greenpeace.org/international/Global/international/publications/climate/2011/Cool%20IT/dirty-data-report-greenpeace.pdf> https://www.bfn.de/fileadmin/BfN/meeresundkuestenschutz/Dokumente/BfN_Literaturstudie_Effekte_marine_Kabel_2007-02_01.pdf
<http://i.unu.edu/media/unu.edu/news/52624/UNU-1stGlobal-E-Waste-Monitor-2014-small.pdf>

16 Ibid, 168

17 Blum, 116

18 For a brief analysis of Al Qaeda's plot, see Simson Garfinkel's article, "Could Al Qaeda Plunge England into an Internet Blackout," retrieved here <https://www.technologyreview.com/s/407528/could-al-qaeda-plunge-england-into-an-internet-blackout/> In the article, Garfinkel compares the attack with an imagined one on the AME West compound he visited, pointing out, "some luddite terrorist using my name could easily have called, arranged the tour, and then blown up the gigaswitch with a pipe bomb." Since 2007, the original Telehouse (North) building has since been joined by larger, more sophisticated ones, Telehouse East and Telehouse West.

19 Blum, 115

20 Despite such secrecy, websites like Empire Logistics, LilSis, and Data Center Map are a few examples of how often invisible power structures, relationships, and processes in logistical infrastructures can be mapped, with special attention to vulnerabilities, key sites of struggle, choke points, and connections to broader dynamics and solidarity opportunities along global supply chains, presumably rupturing the flow of capital by shutting down major thoroughfares. For more, see <http://www.empirelogistics.org/> , <https://littlesis.org/> and <http://www.data-centermap.com/>

21 Ibid, 119

22 Ibid, 23

23 Ibid, 180

24 Kleyman, Bill (2014). "How the Internet May Be Taken Down." Data Center Knowledge. Retrieved 7/14/17 from <http://www.datacenterknowledge.com/archives/2014/08/29/internet-may-taken/>

25 Blum, 200

26 Ibid.

27 Ibid, 83

28 For more on Russia using Ukraine as a cyberwarfare training ground, see Andy Greenberg's article, "How an Entire Nation Became a Test Lab for Cyberwar," (2017), retrieved 7/14/17 from <https://www.wired.com/story/russian-hackers-attack-ukraine/>

29 Ibid.

30 See David Kravets' article, "San Francisco Subway Shuts Cell Service to Foil Protest; Legal Debate Ignites," (2011), retrieved 7/17/17 from <https://www.wired.com>

com/2011/08/subway-internet-shuttering/ or Dana Lievelson's 2013 article, "The Government's Secret Plan to Shut off Cellphones and the Internet, Explained," retrieved 7/17/17 from <http://www.motherjones.com/politics/2013/11/internet-phone-kill-switch-explained/>

31 On Ransomware and the vulnerability of the internet of things to hacking, see, Brian Buntz (2017) "WannaCry Aftermath: Is IoT Ransomware in Our Future," retrieved 7/17/17 from <http://www.ioti.com/security/wannacry-aftermath-iot-ransomware-our-future> For more, Steve Ranger's "Cyberwar: A guide to the frightening future of online conflict" is also helpful, retrieved 8/7/17 from <http://www.zdnet.com/article/cyberwar-a-guide-to-the-frightening-future-of-online-conflict/> .

32 Blum, 30

33 Blum, 6

34 Of course, for some, this may not matter.

35 Blum, 183

36 Perlman, 31-33

37 On the question of whether the technosphere has so domesticated the Earth and biosphere that the climate feedback loops can now no longer be stabilized *without* technological innovation, for instance increasing dependence on carbon capture technology or preventing nuclear meltdown, consider Philip Sutton, co-author of *Climate Code Red*, suggesting at the 2015 SLF Great Debate ("To Collapse or Not to Collapse: Pushing for economic ruin or building a great transition" on 2/13/2015, retrieved at <https://vimeo.com/119722889>):

The notion that you can avoid ecological collapse by causing economic collapse is...a nut's idea. If you cause economic collapse, we have too much carbon dioxide in the air right now. What system is going to take it out under 20,000 years? The only way we're going to get that excess CO2 out of the air is if we build the capacity to take it out and we have some hope...Unless we try to think through what we want and make it happen we can't make it happen... economic collapse as a tool for ecological salvation is nuts, it's unnecessary, and it is actually counterproductive in blocking the ability to restore a safe climate.

It's actually going to make our job worse. (56:30)

38 Timothy Snyder's *Black Earth: The Holocaust as History and Warning* offers an analysis of Nazi Germany's aggression and the vulnerability of collapsed states to serious violence, genocide, and untold oppression and death that may be helpful in considering realistic scenarios following collapse in which power vacuums are filled by pathological tendencies.

39 The positive vision of a green anarchy takes many forms, for instance in Graham Purchase's *Anarchism and Ecology*, Seaweed's *Land and Freedom: an open invitation*, or Do or Die's "Down with the Empire, Up with the Spring, Part Two," which can be found in the anthology *Cracks in a Grey Sky*. Aric McBay's "Goal 2" and "Strategy E" may provide a path as well:

*to defend and rebuild just, sustainable, and autonomous human communities, and, as part of that, to assist in the recovery of the land...[to] rebuild a sustainable subsistence base for human societies (including perennial polycultures for food) and localized, democratic communities that uphold human rights. From "Decisive Ecological Warfare," in *Deep Green Resistance: strategy to**

save the planet

40 For more on the origins of Paleolithic religion, see D. Bruce Dickson's (1990) *The Dawn of Belief: Religion in the Upper Paleolithic of Southwestern Europe*. Studies in Cognitive Archaeology, like Stephen Mithen's *Prehistory of the Mind: The cognitive origins of art, religion, and science* suggests a novel theory of the mind in which separate mental modules are fused together through social and linguistic pathways that recombine specialized intelligences into metacognitive breakthroughs that fluctuate over time. Religion, like art or science then, would combine social, technical, and natural history intelligences in symbolic forms, as when artifacts for social interaction, specialized technology, and anthropomorphic thought promote a cognitive fluidity that selects for greater attunement to the life-support systems a community depends on.

41 One theory for societal collapse is that energy return on energy invested (EROEI) is a chief concern in maintaining social complexity, so that a 3:1 to 5:1 EREI ratio can sustain the essential overhead energy costs of a modern society. Because the continual input of energy from sunlight is necessary to keep ecosystem services functioning, collapse can be seen as the sudden loss of the energy needed to maintain social complexity, stratification, internal and external communication, and exchange and productivity. Joseph Tainter's book, *The Collapse of Complex Societies*, analyzes social collapse in this framework of energy flows and diminishing returns. Further, due to the second law of thermodynamics, all complex adaptive and nonadaptive systems alike must eventually collapse *by definition and design*, as sufficient energy flows cannot ever be maintained forever due to the finite nature of energy in the universe. For more on the role of energy flows and their effect on complexity in cosmic history, see Fred Spier's article, "How Big History Works: Energy Flows and the Rise and Demise of Complexity," published in *Social Evolution & History* 4(1), March 2005 (87-135), updated and available here: http://www.sociostudies.org/almanac/articles/how_big_history_works_energy_flows_and_the_rise_and_demise_of_complexity/



Red tailed Hawk. Photo by Yank.

BLACK AND GREEN REVIEW

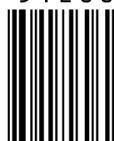
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